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Google Slides Lessons Preview

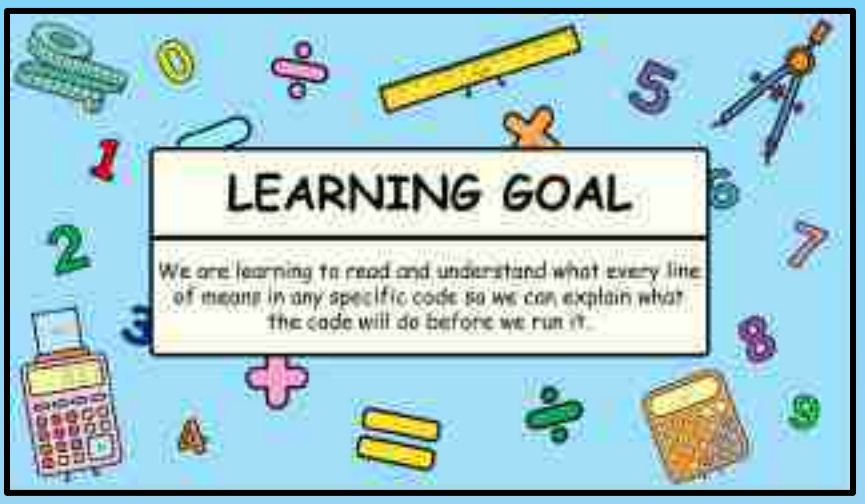
Ontario Math Curriculum

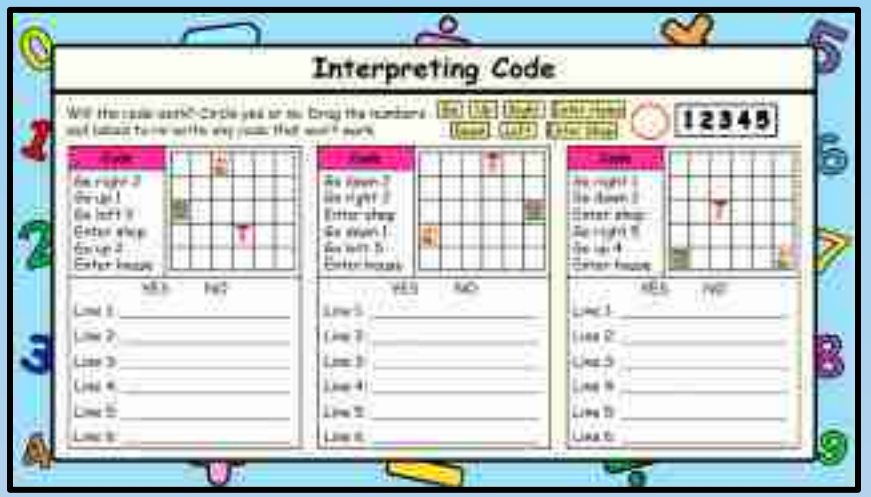
Algebra – Patterns, Equations – Grade 3

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!



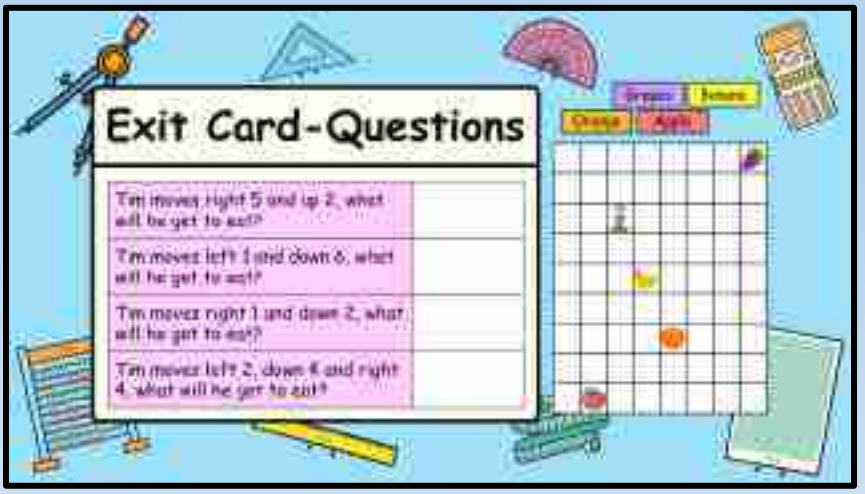


Part 2 – Action!

- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

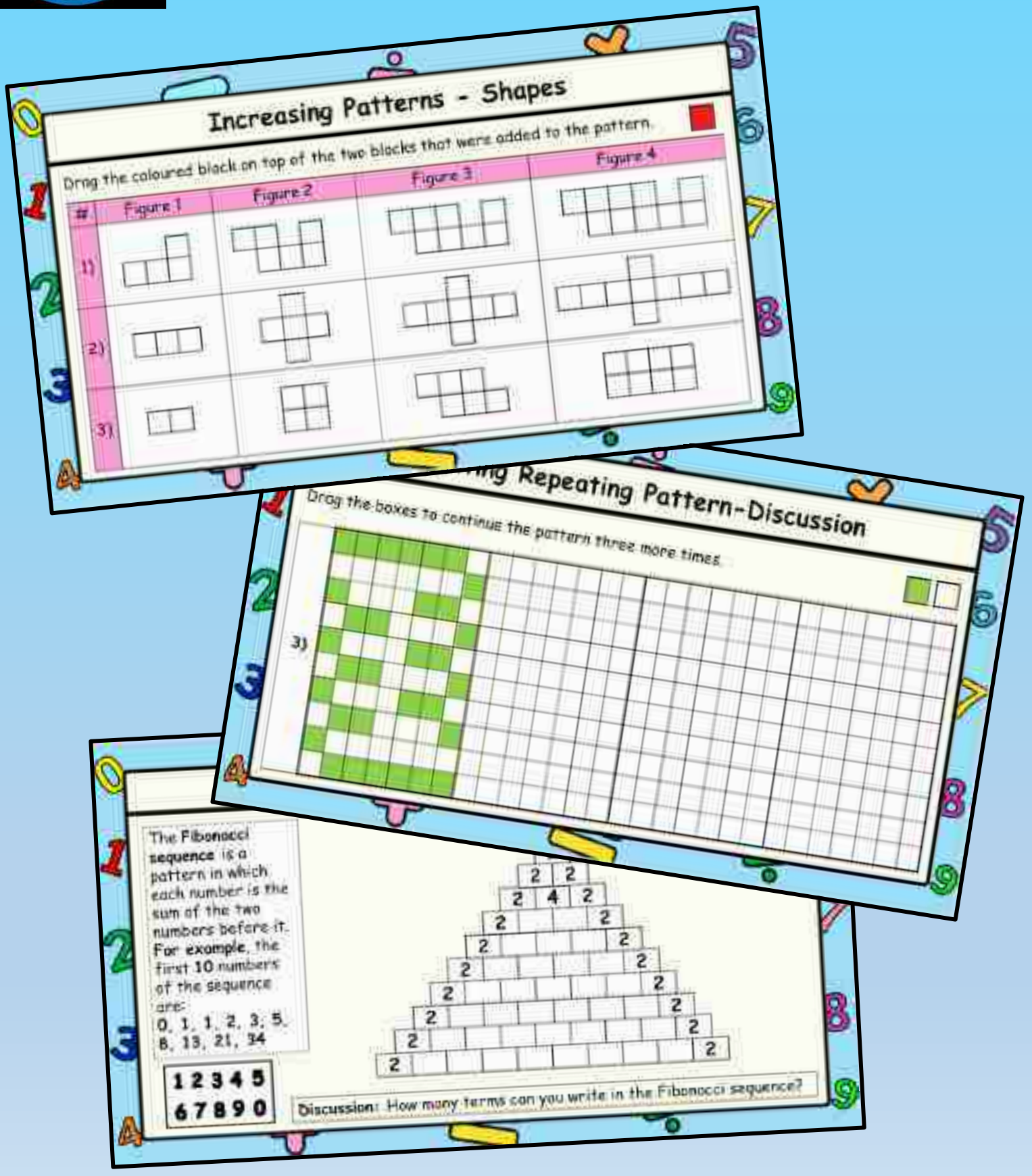
Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!



Ontario Math Curriculum

Algebra – Patterns, Equations – Grade 3



Ontario Math Curriculum

Algebra – Patterns, Equations – Grade 3

Workbook Preview

Grade 3
C1. Patterns and Relationships

	Curriculum Expectations	Pages That Cover the Expectations
C1.1	identify and describe repeating elements and operations in a variety of patterns, including patterns found in real-life contexts	5 – 32, 85 – 86
C1.2		78,
C1.3	determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in patterns that have repeating elements, movements, or operations	33 – 51, 65 – 78, 82 - 91
C1.4	create and describe patterns to illustrate relationships among whole numbers up to 1000	6, 9 – 14, 52 – 64, 79 - 81

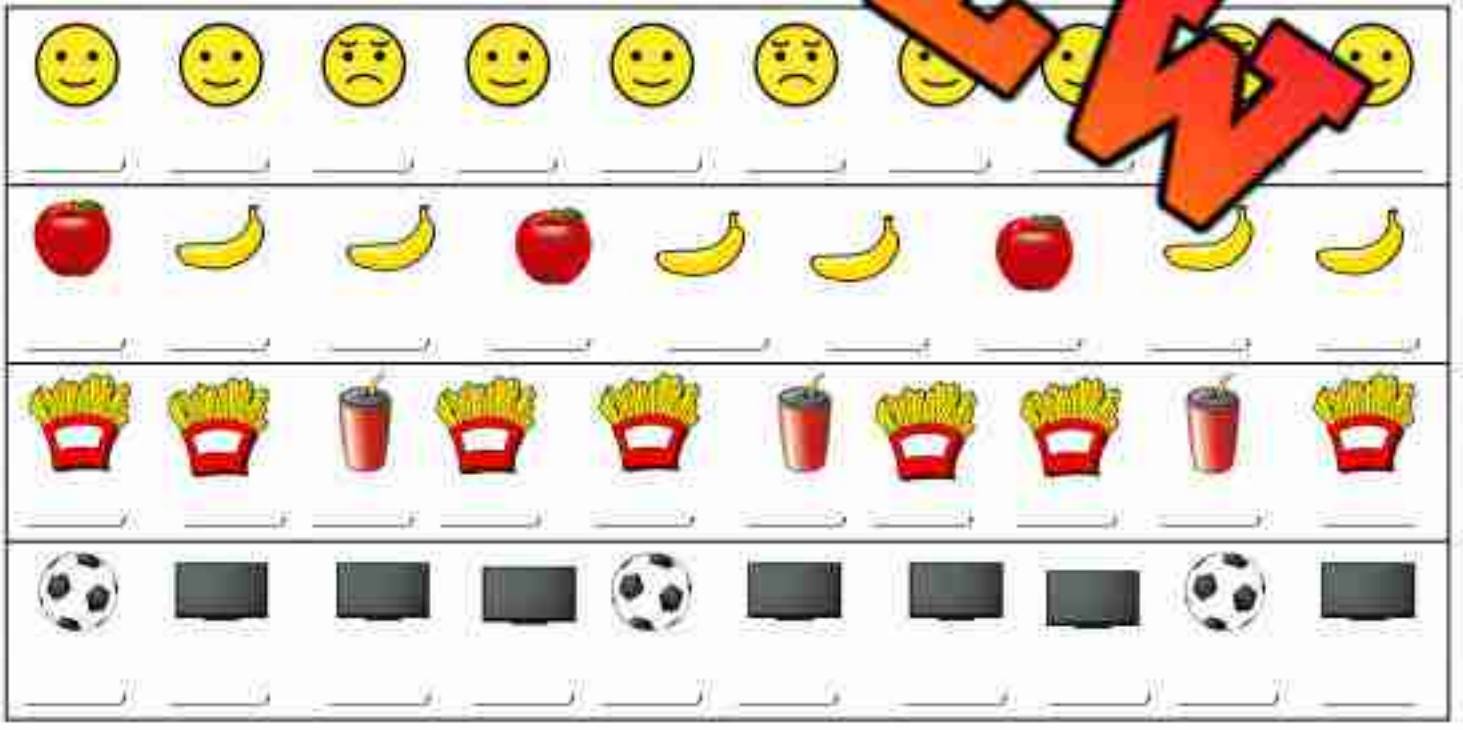
Name: _____ 5

Curriculum Connection
C1.1, C1.2

Repeating Patterns

Part 1 Continue the repeating patterns below by drawing more objects

Part 2 Check out the repeating AB patt… abe… …below A and B

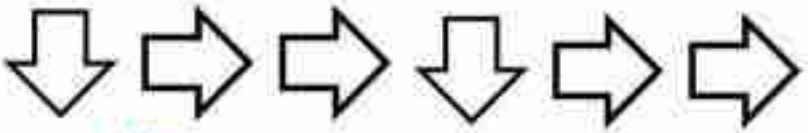


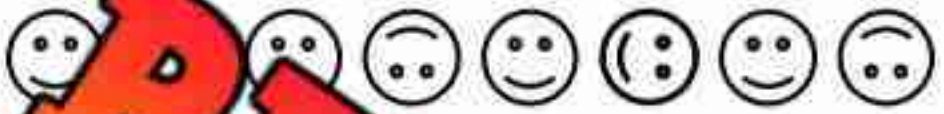
Name: _____ 10

Curriculum Connection
C1.1, C1.2, C1.4

Repeating Patterns – Changing Orientation

Part 1 Continue the repeating patterns below with three more shapes

1) 

2) 

3) 

4) 

Part 2 Draw repeating patterns using t[illegible]he sh[illegible]different position

1)

2)

3)

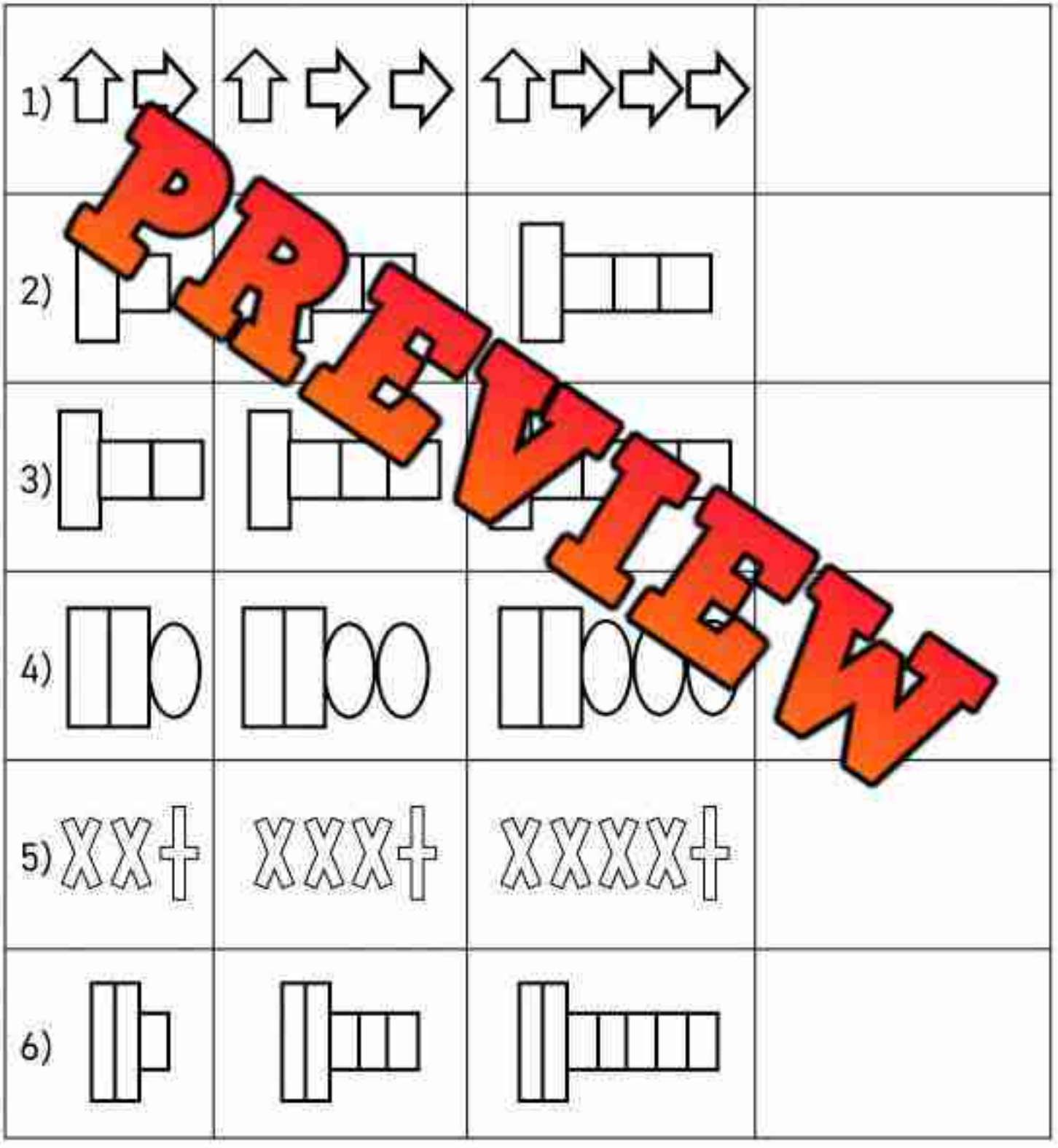
4)

Name: _____ 12

Curriculum Connection
CC.1, CC.2, CC.4

Increasing Patterns – Shapes

Questions | Draw the last part of the pattern



Name: _____ 13

Curriculum Connection
CC.1, CC.2, CC.4

Increasing Patterns – Shapes

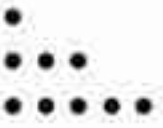
Questions Draw the next line of the increasing pattern

1) Draw the next line in the pattern.

Answer

2) Draw the next line in the pattern.

Answer



3) Draw the next line in the pattern.

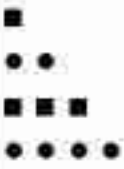
Answer

4) Draw the next line in the pattern.

Answer

5) Draw the next line in the pattern.

Answer

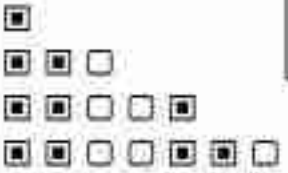


6) Draw the next line in the pattern.

Answer

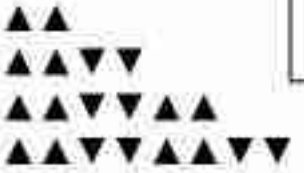
7) Draw the next line in the pattern.

Answer



8) Draw the next line in the pattern.

Answer



Curriculum Connection
CC.1, CC.2, CC.4

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Draw the next 2 lines in the pattern.

Name: _____

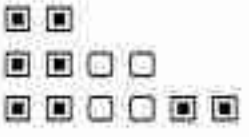
Draw the next 2 lines in the pattern.

Name: _____

Draw the next 2 lines in the pattern.

Name: _____

Draw the next 2 lines in the pattern.

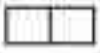
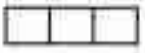
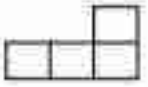
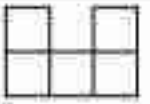
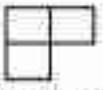
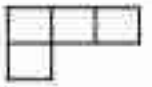
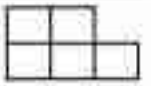
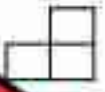
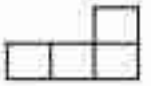


Name: _____ 15

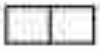
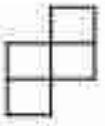
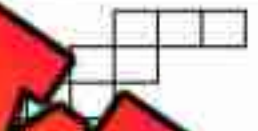
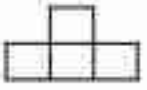
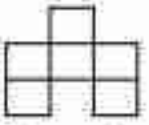
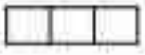
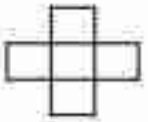
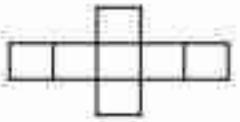
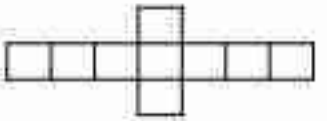
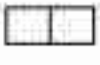
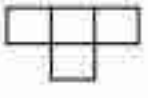
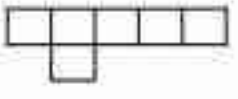
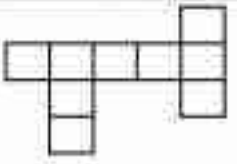
Curriculum Connection
C1.1, C1.2

Increasing Patterns – Shapes

Part 1 Shade in the block that was added to the pattern

1)	Figure 1 	Figure 2 	Figure 3 	Figure 4 
2)	Fi 	Figure 2 	Figure 3 	Figure 4 
3)	Figure 1 	Fig 	Figure 3 	Figure 4 
4)	Figure 1 	re 3 	Figure 4 	

Part 2 Shade in the two blocks [illegible] ere ad [illegible] attern

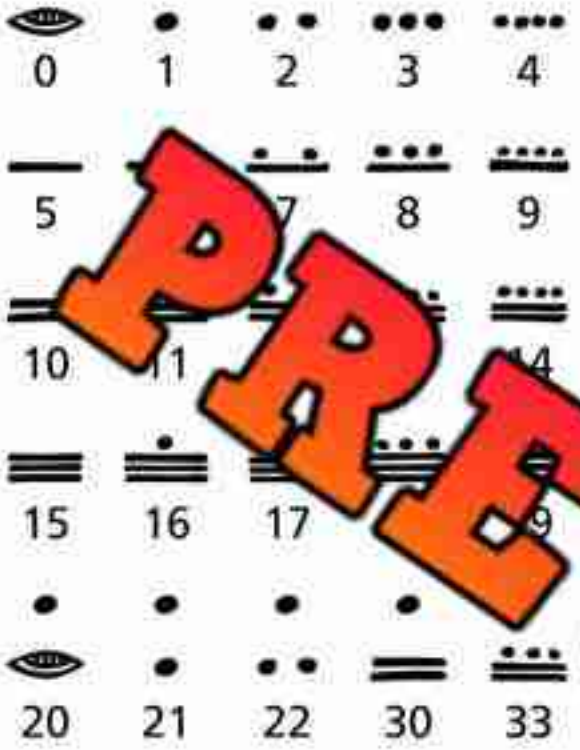
1)	Figure 1 	Figure 2 	Figure 3 	Figure 4 
2)	Figure 1 	Figure 2 	Figure 3 	Figure 4 
3)	Figure 1 	Figure 2 	Figure 3 	Figure 4 
4)	Figure 1 	Figure 2 	Figure 3 	Figure 4 

Name: _____ 19

Curriculum Connection
C1.1, C1.2

Mayan Number System Patterns

Analyze Check out the Mayan Number System below. Write what you notice about the patterns found in the number system.



1) What do you think the dots mean?

2) What do you think the shells mean?

t do you think the lines mean?

4) How are some dots different? Do they have [illegible] value? Explain.

5) Write the symbols for the numbers below.

Number	Symbol	Number	Symbol
1) 0		5) 45	
2) 5		6) 52	
3) 12		7) 67	
4) 27		8) 91	

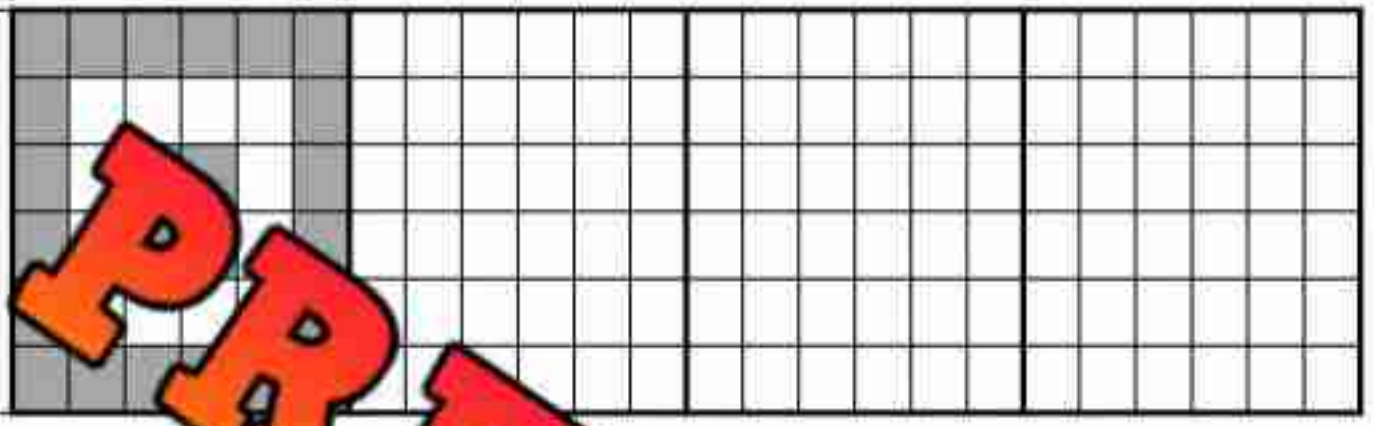
Name: _____ 20

Curriculum Connection
C1.1, C1.2

Quilting Repeating Pattern

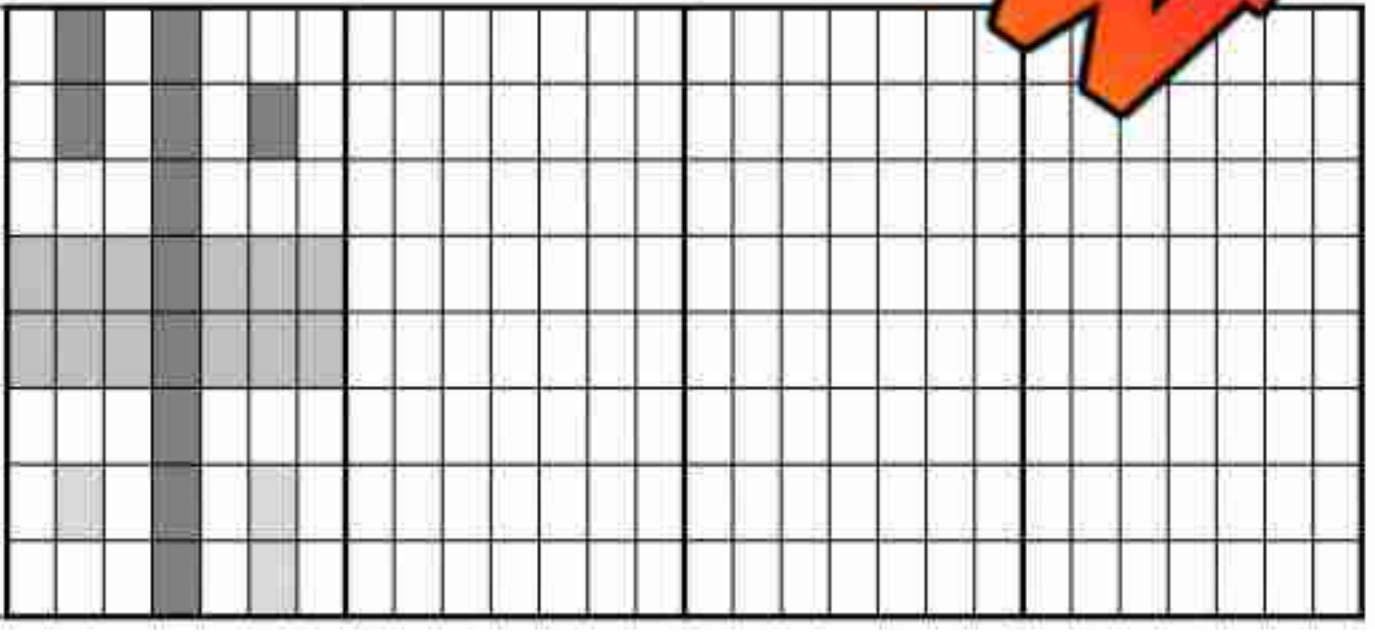
Draw Continue the pattern by drawing the replica of what you see multiple times

1)



2)

3)



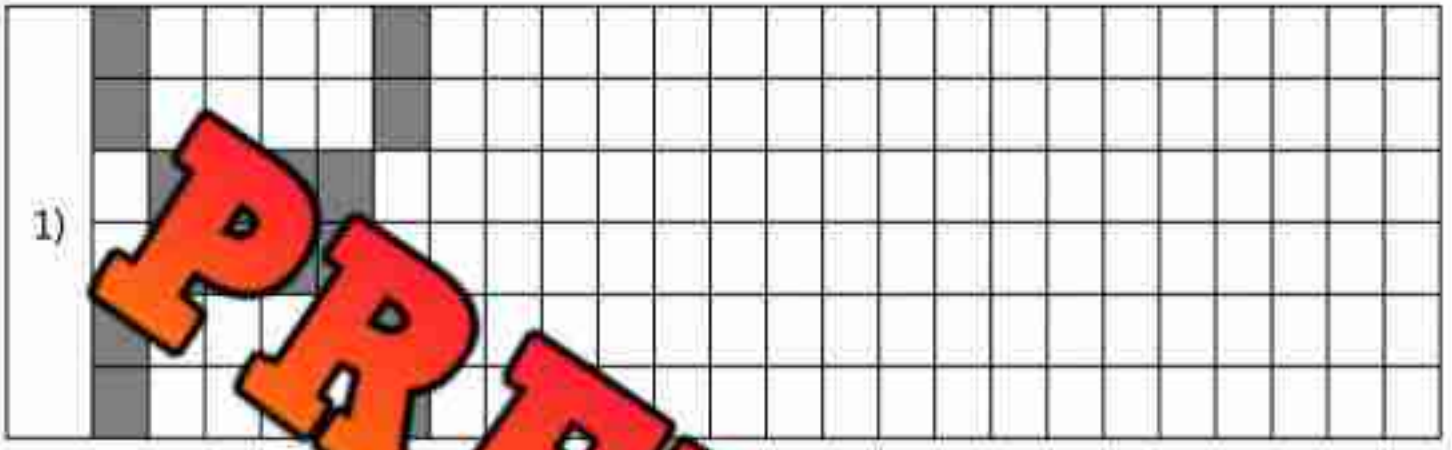
Name: _____ 22

Curriculum Connection
C1.1, C1.2

Quilting Repeating Pattern

Draw Continue the pattern by drawing the replica of what you see multiple times

1)



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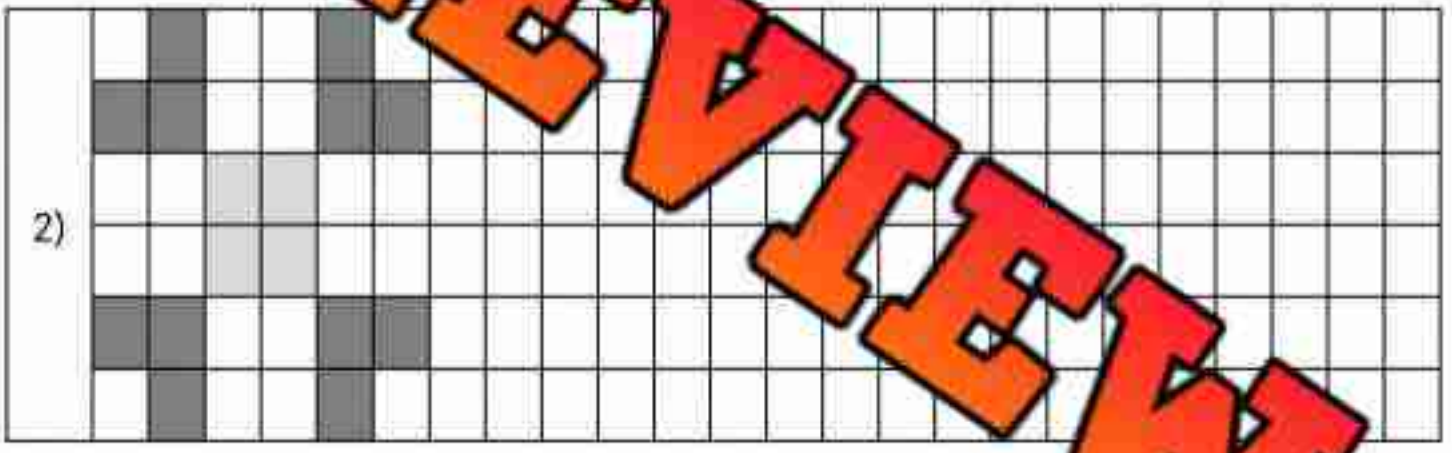
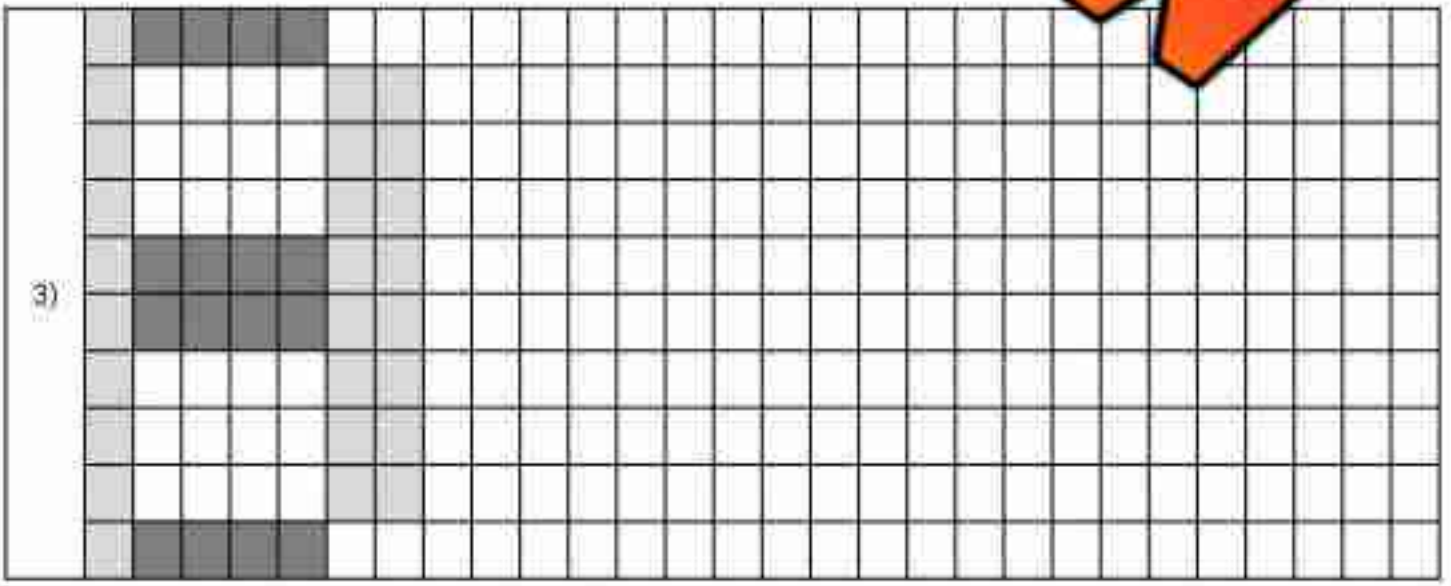


3)



Name: _____ 25

Curriculum Connection
CC.1, CC.2

Decreasing Patterns – Emojis

Questions | Draw the missing line of the decreasing pattern

1) Draw the missing line in the pattern.

2) Draw the missing line in the pattern.

3) Draw the missing line in the pattern.

4) Draw the missing line in the pattern.

5) Draw the missing line in the pattern.

6) Draw the missing line in the pattern.

7) Draw the missing line in the pattern.

8) Draw the missing line in the pattern.

Name: _____ 26

Curriculum Connection
C1.1, C1.2

Decreasing Patterns

Questions | Fill in the numerical sequences for the patterns below

1) Kerry kept track of how many cookies she ate each day using addition signs.

Day 1 Day 2 Day 3 Day 4 Day 5

Numerical Sequence

_____, _____, _____, _____, _____

2) Ally writes down how many days it was rainy each month from June – November.

June July August

Numerical Sequence

_____, _____, _____, _____, _____

3) Sam counted how many push-ups he could do every minute for 5 minutes.

Min 1 Min 2 Min 3 Min 4 Min 5

Numerical Sequence

_____, _____, _____, _____, _____

Name: _____ 28

Curriculum Connection
C1.1, C1.2

Hundreds Chart Patterns

Questions Fill in the missing numbers

1	2	3	4	5	6	7	8	9	10
11		13	14	15	16	17	18	19	20
21			24	25	26	27	28	29	30
31	32			36	37	38	39	40	
41	42	43			47	48	49	50	
51	52	53	54		56		58	59	60
61	62	63	64	65			69	70	
71	72	73	74	75	76				
81	82	83	84	85	86	87	88		90
91	92	93	94	95	96	97	98	99	100

Directions Follow the instructions below

1) Colour the odd numbers 

2) Colour the even numbers 

Name: _____ 30

Curriculum Connection
C1.1, C1.2

Hundreds Chart Patterns

Directions Follow the instructions below

Colour the pattern rule: start at 3, add 3 each time									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Colour the pattern rule: start at 1, add 1 each time									
1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Name: _____ 32

Curriculum Connection
C1.1, C1.2

Fibonacci Sequence

The Fibonacci sequence is a pattern in which each number is the sum of the two numbers before it. For example, the first 10 numbers of the sequence are:

0, 1, 1, 2, 3, 5, 8, 13, 21, 34

Part 1 Fill in the numbers below each pair of numbers

Part 2 How many terms can you write in the Fibonacci sequence?

Name: _____ 33

Curriculum Connection
CL3

Growing Patterns - Addition

Growing/Increasing Patterns

+10 +10 +10 +10 +10
10, 20, 30, 40, 50, 60

+5 +5 +5 +5 +5
3, 8, 13, 18, 23, 28

Part 1 owing Patterns - Addition

1) 2, 4, 6, ____, ____, ____	2) 6, 12, 18, ____, ____, ____
3) 10, 15, 20, ____, ____, ____	58, ____, ____, ____
5) 8, 16, 24, ____, ____, ____	6) ____, ____, ____

Part 2 Follow the rule by adding the next number in th

1) (Add 5) 7, 12, 17, ____, ____, ____	2) (Add 3) 72, 75, 78, ____, ____, ____
3) (Add 6) 2, 8, 14, ____, ____, ____	4) (Add 8) 8, 16, 24, ____, ____, ____
5) (Add 10) 4, 14, 24, ____, ____, ____	6) (Add 4) 42, 46, 50, ____, ____, ____

Name: _____ 36

Curriculum Connection
CL3

Increasing Patterns Rules – Adding To 100

Questions Fill in the blanks by figuring out the pattern rules

12, 15, 18, 21, 24, 27, 30

t at _____, then add _____ each time

8, 53, 58, 63, 68, 73

Sta add _____ each time

21, 31, 41 71, 81

Start at _____, then a time

37, 43, 49, 55, 61, 73

Start at _____, then add _____ eac

54, 61, 68, 75, 82, 89, 96

Start at _____, then add _____ each time

40, 49, 58, 67, 76, 85, 94

Start at _____, then add _____ each time

Name: _____ 38

Curriculum Connection
CL3

Using Pattern Rules – Adding To 100

Questions	Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 7, add 3 each time

2) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 10, add 10 each time

3) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 18, add [illegible] each time

4) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 36, add 8 each time

5) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 54, add 6 each time

Name: _____ 40

Curriculum Connection
CL3

Growing Patterns

Growing/Increasing Patterns

Addition
+2 +2 +2 +2
2, 4, 6, 8, 10

Multiplication
x2 x2 x2 x2
2, 4, 8, 16, 32

Part 1 Growing Patterns - Addition

1) 5, 10, 15, _____, _____, _____	4) 10, 20, 30, _____, _____, _____
2) 3, 6, 9, _____, _____, _____	5) 100, 200, 300, _____, _____, _____
3) 2, 4, 6, _____, _____, _____	6) _____, _____, _____

Part 2 Growing Patterns - Multiplication

1) 5, 10, 20, _____, _____, _____	4) 10, 20, 40, _____, _____, _____
2) 2, 4, 8, _____, _____, _____	5) 100, 200, 400, _____, _____, _____
3) 1, 3, 9, _____, _____	6) 1, 5, 25, _____, _____, _____

Curriculum Connection
CL3

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Growing Multiplication Patterns

1) (Multiply by 3)

1, 3, _____, _____

2) 5, 25, 125, 3125, 15625

Start at ____, multiply by ____ each time

3) ____, ____, ____, ____

Pattern Rule: Start at 2, multiply by 4 each time.

Name: _____

Growing Multiplication Patterns

1) (Multiply by 3)

1, 3, _____, _____

2) 5, 25, 125, 3125, 15625

Start at ____, multiply by ____ each time

3) ____, ____, ____, ____

Pattern Rule: Start at 2, multiply by 4 each time.

Name: _____

Growing Multiplication Patterns

1) (Multiply by 3)

1, 3, _____, _____

2) 5, 25, 125, 3125, 15625

Start at ____, multiply by ____ each time

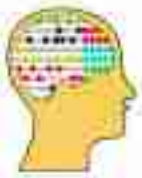
3) ____, ____, ____, ____

Pattern Rule: Start at 2, multiply by 4 each time.

Name: _____ 42

Curriculum Connection
CL3

Shrinking Patterns - Subtraction



Shrinking/Decreasing Patterns

-10 -10 -10 -10 -10
60, 50, 40, 30, 20, 10

-5 -5 -5 -5 -5
45, 40, 35, 30, 25, 20

Part 1

Fill in the missing numbers in the pattern

1) 12, 10, 8, _____, _____, _____	2) 23, 19, 15, _____, _____, _____
3) 32, 26, 20, _____, _____, _____	4) [illegible] 65, _____, _____, _____
5) 56, 48, 40, _____, _____, _____	6) [illegible] _____, _____, _____

Part 2

Follow the rule by adding the next number in the

1) (Subtract 2) 18, 16, 14, _____, _____, _____	2) (Subtract 3) 30, 27, 24, _____, _____, _____
3) (Subtract 5) 38, 33, 28, _____, _____, _____	4) (Subtract 10) 60, 50, 40, _____, _____, _____
5) (Subtract 6) 62, 56, 50, _____, _____, _____	6) (Subtract 4) 78, 74, 70, _____, _____, _____

Name: _____ 43

Curriculum Connection
CL3

Decreasing Patterns Rules – Subtracting (1)

Questions | Fill in the blanks by figuring out the pattern rules

21, 18, 15, 12, 9, 6, 3, 0

Start at _____, then subtract _____ each time

39, 34, 29, 24, 19, 14

Start at _____, then subtract _____ each time

58, 54, 50, 46, 42, 38, 34

Start at _____, then subtract _____ each time

71, 65, 59, 53, 47, 41, 35

Start at _____, then subtract _____ each time

88, 80, 72, 64, 56, 48, 40

Start at _____, then subtract _____ each time

99, 92, 85, 78, 71, 64, 57

Start at _____, then subtract _____ each time

Name: _____ 45

Curriculum Connection
C1.3

Using Pattern Rules – Subtraction (1)

Questions | Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 47, subtract 3 each time

2) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 80, subtract 10 each time

3) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 36, subtract 4 each time

4) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 68, subtract 8 each time

5) _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 91, subtract 6 each time

Name: _____ 47

Curriculum Connection
C1.3

Shrinking / Decreasing Patterns

Shrinking/Decreasing Patterns

Subtraction

-3 -3 -3 -3

20, 17, 14, 11, 8

Division

÷2 ÷2 ÷2

80, 40, 20, 10

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Part 1 Shrinking Patterns - Subtraction

1) 10, 8, 6, _____, _____, _____

2) 20, 17, 14, _____, _____, _____

3) 30, 25, 20, _____, _____, _____

4) 174, 170, 166, _____, _____, _____

5) 100, 90, 80, _____, _____, _____

145, 140, _____, _____, _____

129, _____, _____

8) 158, 152, 146, _____, _____

Part 2 Shrinking Patterns - Division

÷2 ÷2 ÷2

1) 120, 60, 30, _____

÷3 ÷3 ÷3

3) 162, 54, 18, _____, _____

÷2 ÷2 ÷2

2) 800, 400, 200, _____, _____

÷2 ÷2 ÷2

4) 160, 80, 40, _____, _____

Name: _____ 48

Curriculum Connection
CL3

Pattern Rule – Addition

Part 1 Continue the growing/increasing patterns below

1) 10, 20, 30, _____, _____, _____
Pattern Rule: Start at 10, add _____ each time

2) 2, 5, 8, _____, _____, _____
Pattern Rule: Start at _____, add _____ each time

3) 35, 40, 45, _____, _____, _____
Pattern Rule: Start at _____, add _____ each time

4) 50, 60, 70 , _____, _____, _____
Pattern Rule: Start at _____, add _____ each time

5) 143, 147, 151, _____, _____, _____
Pattern Rule: Start at _____, add _____ each time

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Part 2 Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 20, add 5 each time

2) _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 10, add 0 each time

3) _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 127, add 5 each time

4) _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 116, add 4 each time

Name: _____ 49

Curriculum Connection
CL3

Pattern Rule - Multiplication

Part 1 Continue the growing/increasing patterns below

1) 5, 10, 20, _____, _____, _____
Pattern Rule: Start at 5, multiply by _____ each time

2) 1, 3, 9, _____, _____, _____
Pattern Rule: Start at _____, multiply by _____ each time

3) 1, 4, _____, _____, _____
Pattern Rule: Start at _____, multiply by _____ each time

4) 10, 20, 40, _____, _____, _____
Pattern Rule: Start at _____, multiply by _____ each time

5) 2, 6, 18, _____, _____, _____
Pattern Rule: Start at _____, multiply by _____ each time

Part 2 Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 1, multiply by 2 each time

2) _____, _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 3, multiply by 1 each time

3) _____, _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 5, multiply by 4 each time

4) _____, _____, _____, _____, _____, _____, _____
Pattern Rule: Start at 10, multiply by 2 each time

Name: _____ 50

Curriculum Connection
CL3

Pattern Rule - Subtraction

Part 1 Continue the shrinking/decreasing patterns below

1) 12, 10, 8, _____, _____, _____

Pattern Rule: Start at 12, subtract _____ each time

2) 22, 1_____, _____, _____

Patter_____at _____ subtract _____ each time

3) 1_____0, 13_____, _____, _____

Pattern Ru_____ subtract _____ each time

4) 74, 68, 62, _____, _____, _____

Pattern Rule: Start at _____ each time

5) 133, 123, 113, _____, _____, _____

Pattern Rule: Start at _____ subtract _____ each time

Part 2 Write your own patterns using the p_____e

1) _____, _____, _____, _____, _____

Pattern Rule: Start at 50, subtract 0 each time

2) _____, _____, _____, _____, _____

Pattern Rule: Start at 236, subtract 6 each time

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 794, subtract 5 each time

4) _____, _____, _____, _____, _____

Pattern Rule: Start at 142, subtract 4 each time

Name: _____ 51

Curriculum Connection
C1.3

Pattern Rule - Division

Part 1 Continue the growing/increasing patterns below

1) 120, 60, 30, _____
Pattern Rule: Start at 120, divide by 2 each time

2) 10, _____, _____, _____
Pattern Rule: Start at 10, divide by _____, each time

3) 243, 81, 27, _____, _____
Pattern Rule: Start at _____, divide by _____, each time

4) 256, 64, 16, _____, _____
Pattern Rule: Start at _____, divide by _____ time

Part 2 Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____
Pattern Rule: Start at 64, divide by 2 each time

2) _____, _____, _____, _____, _____
Pattern Rule: Start at 150, divide by 1 each time

3) _____, _____, _____, _____, _____
Pattern Rule: Start at 375, divide by 5 each time

4) _____, _____, _____, _____, _____
Pattern Rule: Start at 1024, divide by 4 each time

Name: _____ 56

Curriculum Connection
CL4

Number Strings – Addition and Subtraction

Fill in the Blanks Fill in the blanks to investigate the patterns between addition and subtraction

Addition	Subtraction
+ 5 = _____	67 – 5 = _____
= _____	67 – 4 = _____
4 + = _____	67 – 3 = _____
65 + = _____	67 – 2 = _____
66 + 1 = _____	67 – 1 = _____
67 + 0 = _____	– 0 = _____

Addition	ion
50 + _____ = 57	=
_____ + 6 = 57	57 – _____
52 + _____ = 57	_____ – 5 52
53 + 4 = _____	57 – _____ = 53
54 + _____ = 57	57 – 3 = _____
_____ + 2 = 57	57 – _____ = 55
56 + _____ = 57	_____ – 1 = 56
57 + 0 = _____	57 – 0 = _____

Name: _____ 57

Curriculum Connection
CL4

Number Strings – Addition and Subtraction

Fill in the Blanks — Fill in the blanks to investigate the patterns between addition and subtraction

Addition	Subtraction
900 + 5 = _____	905 – _____ = 900
_____ = 905	905 – 4 = _____
_____ 905	905 – _____ = 902
903 + _____ =	_____ – 2 = 903
904 + 1 = _____	905 – _____ = 904
905 + _____ = 905	5 – 0 = _____

Addition	tion
400 + _____ = 407	4 400
401 + 6 = _____	407 – 6 =
_____ + 5 = 407	_____ – 5 02
403 + _____ = 407	407 – _____ = 403
404 + 3 = _____	407 – 3 = _____
405 + _____ = 407	407 – _____ = 405
_____ + 1 = 407	_____ – 1 = 406
407 + _____ = 407	407 – _____ = 407

Name: _____ 58

Curriculum Connection
C1.4

Patterning Subtraction Word Problems – Spending

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

Henry [illegible] lunch every day for one week. After his first lun[illegible] has $[illegible] after his second lunch, he has $172. After his third lunch, h[illegible]1.

a) How much mone[illegible] Henry [illegible] left after his fourth lunch?

b) How much money will Henry have after his 7th lunch?

c) How much does each lunch cost?

Name: _____ 59

Curriculum Connection
C1.4

Patterning Subtraction Word Problems – Running

Questions | Follow the problem-solving steps below

☐ Read the problem carefully	☐ Underline important information	☐ Draw pictures
☐ Write a number sentence	☐ Solve the problem	☐ Check your answer

Riley [illegible] marathon each day for 9 days. After her first day, she had [illegible] that she needed to run. After the second day, she had [illegible] left. After the third day, she had 147km left.

a) How many km did she have left after the fourth day?

b) How many km did she have left after the 7th day?

c) How many km is a half marathon?

Name: _____ 60.

Curriculum Connection
CLK

Activity Title: Pattern Treasure Hunt

Objective

What are we learning about?

To reinforce students' understanding of growing addition and shrinking subtraction patterns through a dynamic and engaging treasure hunt game. This activity aims to improve problem-solving speed and accuracy while promoting teamwork and active learning.

Materials

you will need for the activity.

- Stop tch or d use a smartphone)
- Index card
- Markers
- Small prizes or (fo
- Tape

Instructions

How you will comp acti

1) Cut out the index cards provided. These wil trea challenge questions.
2) Hide these cards around the classroom or in a be afe ou rea, taping them under chairs, desks, or tucked into non-obvio
3) Divide the class into small teams and give each team a stopwa
4) Explain the game: each team will hunt for a card, solve the problem s quickly as they can, and return to you for verification.
5) Start the timer when you say "Go!" Each team rushes to find their first card.
6) When a team thinks they have the correct answer, they come back to you for verification. If they get it right, the teacher keeps the card. If the answer is wrong, they can try again or hide the card back in its original spot and find a new card.
7) The game continues until all cards are found or you call time. The team with the most correct answers wins.
8) Discuss the game, focusing on the concepts taught on the cards.

Name: _____ 61

Curriculum Connection
C1.4

Instructions Cut out the cards below

1) Start at 100, add 50 each time. 100, _____, _____, _____	2) Start at 200, subtract 20 each time. 200, _____, _____, _____
3) Start [illegible] each _____, _____, _____	4) Start at 800, subtract 100 each time. _____, _____, _____
5) 250, 275, 300, _____, _____, _____	[illegible] tract 50 [illegible] _____, _____
7) Start at 600, add 100 each time. _____, _____, _____, _____	8) Pattern Rule: Start at 900, subtract 150 each time. 900, 750, 600, _____, _____, _____, _____

Name: _____ 64

Curriculum Connection
CC.4

Instructions | Cut out the cards below

25) A stadium had 1000 fans. 150 leave each hour. How many are left after 4 hours?	26) Pattern Rule: Subtract 250 starting from 950 _____, _____, _____
27) A movie [illegible] starts with 750 tickets [illegible] day. How many [illegible]	28) (Subtract 250) 1000, 750, 500, _____, _____, _____
29) A warehouse had 900 boxes and removed 120 weekly. How many after 4 weeks?	[illegible] items a day [illegible] by 40 each day. [illegible] days?
31) A bike rental has 600 bikes. Each month, they add 130. How many after 3 months?	32) A zoo had 750 animals and added 95 each year. How many after 4 years?

Name: _____ 65

Curriculum Connection
C1.2, C1.3

Input/Output Table – Addition

Rule: add 5	
In	Out
25	30
55	60
140	145
180	185

Que… …he input/output tables below

In	Out
20	
30	
50	
120	

Rule: add 4	
In	Out
5	
11	
…2	
8	
…	…
	Out
20	
28	
108	
257	

Rule: add 2	
In	Out
2	
18	
49	
92	

Rule: add 6	
In	Out
20	
50	
100	
140	

Rule: add 8	
In	Out
2	
5	
10	
20	

Name: _____ 67

Curriculum Connection
C1.2, C1.3

Patterning Word Problem - Earnings

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

Luna [illegible] week for 6 days. The first day she made $25 and [illegible] day, she had $50. After the third day she had $75.

a) How much [illegible] the 6 days of work?

b) How much did she make each day?

Name: _____ 69

Curriculum Connection
C12, C13

Patterning Word Problem - Snowfall

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

The sn[illegible] outside Aidan's house. He records the height of the [illegible] each [illegible]fter the 1st hour, it was 200mm. After the 2nd hour, it was [illegible] ft[illegible] the 3rd hour it was 320mm.

a) What will th[illegible]igh[illegible]w be after the 4th hour?

b) What will the height of the snow be after the 7th hou[illegible]

Name: _____ 71

Curriculum Connection
C1.2, C1.3

Input/Output Table – Subtraction

Rule: subtract 5	
In	Out
35	30
65	60
130	125
160	155

Ques... the input/output tables below

R... 5	
In	O...
10	
35	
55	
110	

Rule: subtract 4	
In	Out
5	
25	
57	

Rule: subtract 2	
In	Out
4	
28	
45	
77	

...ct 5	
	Out
9	
18	
122	
157	

Rule: subtract 6	
In	Out
6	
14	
47	
138	

Rule: subtract 8	
In	Out
23	
66	
109	
120	

Name: _____ 74

Curriculum Connection
C1.2, C1.3

Patterning Multiplication Word Problems – Reading

Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

Dani[illegible] from his book on day one, 2 pages of his boo[illegible] day t[illegible] ages of his book on day three, and 8 pages of his book[illegible] ur[illegible]

a) How many p[illegible] on day 5?

b) How many pages did he read on day 7?

c) What is the pattern rule?

Name: _____ 75

Curriculum Connection
C1.2, C1.3

Activity: Finger Signals Quiz - Doubling Patterns

Objective What are we learning about?

Students will understand and reinforce their knowledge of doubling patterns using multiplication.

Materi-l ...u will need for the activity.

- A list of q...

Instructions How ...mple... ...tivity

1. Prepare a list of questions with ...nswer ...s labeled A, B, C, and D.
2. Explain the finger signals for each ans... ...lice: ... for A, two fingers for B, three fingers for C, and four fingers ...D.
3. Inform the students they will show their answer ... fi... ...when you read each question.
4. Read the first question aloud clearly and repeat if necessary.
5. Give students a few moments to think about their answer and decide independently.
6. After a countdown (e.g., "3, 2, 1"), have all students show their answer simultaneously by raising the appropriate number of fingers.
7. Reveal the correct answer and explain why it is correct.
8. Repeat with different questions to reinforce understanding of doubling patterns.

Name: _____ 76

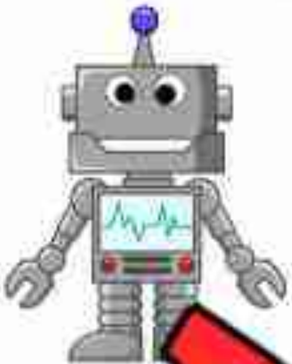
Curriculum Connection
C1.2, C1.3

Question	A	B	C	D
Start with 6. What is the third number in the doubling pattern?	12	18	24	30
Which number comes next in the pattern: 2, 4, 8, ___?	10	12	14	16
Which pattern starts with 5 and follows a doubling sequence?	5, 10, 15	5, 10, 20	5, 15, 20	5, 10, 25
Start with 3. What is the fifth number in the doubling pattern?	12	24	36	48
If the pattern starts at 2, what will the third number be when doubling?	4	6	8	12
If the pattern starts at 7, what will the fourth number be if it continues doubling each time?	14	28	35	42
What is the easiest way to find the next number in a doubling pattern?	Add	Subtract	Multiply	Divide
Which number comes next in the pattern: 1, 2, 4, ___?	6	8	10	12
What is the second number in the doubling pattern starting with 5?	10	15	20	25
Which sequence is a doubling pattern starting with 3?	3, 6, 9	3, 6, 12	3, 9, 15	3, 9, 18
Start with 6. What is the third number in the doubling pattern?	12	18	24	30
Which number comes next in the pattern: 2, 4, 8, ___?	10	12	14	16
Start with 3. What is the fifth number in the doubling pattern?	12	24	36	48
If the pattern starts at 2, what will the third number be when doubling?	4	6	8	12

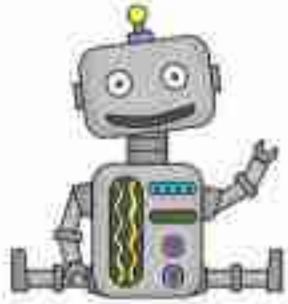
Name: ______________________

Curriculum Connection
C12, C13

Input/Output Table – Division



Rule: divide by 2	
In	**Out**
10	5
8	4
6	3
4	2



Ques[illegible]he input/output tables below

Ru[illegible]1	
In	**Out**
1	
5	
10	
20	

Rule: divide by 2	
In	**Out**
6	
10	
[illegible]4	
2[illegible]	

Rule: divide by 3	
In	**Out**
6	
9	
12	
15	

[illegible]y 4	
In	**Out**
4	
8	
16	
32	

Rule: divide by 5	
In	**Out**
10	
20	
40	
50	

Rule: divide by 10	
In	**Out**
10	
20	
50	
100	

Name: _____ 78

Curriculum Connection
C1.2, C1.3

Patterning Division Word Problems – Melting

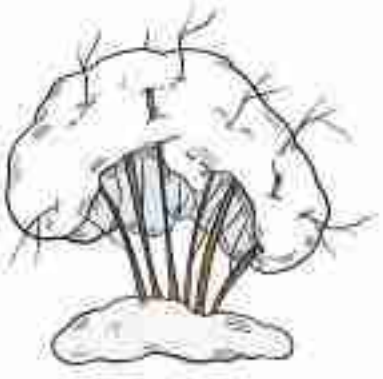
Questions | Follow the problem-solving steps below

- ☐ Read the problem carefully
- ☐ Underline important information
- ☐ Draw pictures
- ☐ Write a number sentence
- ☐ Solve the problem
- ☐ Check your answer

Lincol[illegible]e amount of snow in his backyard. After a heavy sno[illegible]0mm of snow. On day 2, there was 320mm of snow. [illegible] day [illegible]as 160mm of snow. On day 4, there was 80mm of snow.

a) If the pattern con[illegible]ow m[illegible]ow will be left on day 5?

b) How much snow will be left on day 6?



c) What is the pattern rule?

Name: _____ 79

Curriculum Connection
C1.4

Number Strings – Multiplication and Division

Fill in the Blanks Fill in the blanks to investigate the patterns between multiplication and division

Multiplication	Division
× 1 = _____	5 ÷ _____ = 5
_____ = 10	_____ ÷ 2 = 5
_____ = 15	_____ ÷ 3 = 5
5 × 4 = _____	20 ÷ _____ = 5
5 × 5 = _____	25 ÷ 5 = _____
5 × _____ = 30	_____ = 5
5 × _____ = 35	_____ = 5
_____ × 8 = 40	_____
5 × _____ = 45	45 ÷ _____
5 × 10 = _____	50 ÷ 10 = _____

Write What patterns did you notice when filling out the table?

_____

_____

_____

Name: _____ 80

Curriculum Connection
C1.4

Number Strings – Multiplication and Division

Fill in the Blanks Fill in the blanks to investigate the patterns between multiplication and division

Multiplication	Division
× 1 = _____	10 ÷ _____ = 10
_____	20 ÷ 2 = _____
10 × _____ = 30	30 ÷ 3 = _____
10 × _____ = 40	40 ÷ _____ = 10
10 × 5 = _____	50 ÷ 5 = _____
10 × _____ = 60	60 ÷ 6 = _____
_____ × 7 = 70	70 ÷ _____ = 10
10 × _____ = 80	80 ÷ _____ = 10
10 × 9 = _____	90 ÷ _____ = 10
10 × 10 = _____	100 ÷ 10 = _____

Write What patterns did you notice when filling out the table?

_____

_____

_____

Name: _____ 81

Curriculum Connection
CCSS

Pattern Rule – Input/Output Tables

Add 10	
In	Out
20	30
50	60
170	180
225	235

Inst… the input/output tables below

R…	
In	O…
10	
60	
90	
155	

Rule: add 3	
In	Out
3	
12	

Rule: subtract 6	
In	Out
26	20
38	
59	
72	

R…: s… t 4	
20	
28	
108	
257	

Rule: Divide by 2	
In	Out
20	10
50	
100	
140	

Rule: Multiply by 3	
In	Out
2	
5	
10	
20	

Curriculum Connection
C1.2, C1.3

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Fill in the input/output tables below

Rule:	
In	Out
2	
	15
10	

Rule: divide by 4	
In	Out
20	
	10

Name: _____

Fill in the input/output tables below

Rule: multiply by 3	
In	Out
	3
2	
	15

Rule: divide by 4	
In	Out
8	
20	
	6
	10

Name: _____

Fill in the input/output tables below

Rule: multiply by 3	
In	Out
	3
2	
	15
10	

Rule: divide by 4	
In	Out
8	
20	
	6
	10

Name: _____

Fill in the input/output tables below

Rule: multiply by 3	
In	Out
	3
2	
	15
10	

Rule: divide by 4	
In	Out
8	
20	
	6
	10

Name: _____ 84

Curriculum Connection
C1.2, C1.3

Pattern Rule – Input/Output Tables

Part 1 — Fill in the input/output tables below

Rule: Subtract 8	
In	Out
14	
2	
	58

Rule: Add 13	
In	Out
15	
20	
	62
	138

Rule:	
In	Out
41	
87	
	12
	177

Rule: Multiply by 2	
In	Out
10	
20	
	80
	140

Rule: Divide by 2	
In	Out
20	
48	
	31
	42

de by 5	
	Out
20	
	7

Part 2 — Write the input/output rules below

In	Out
2	6
5	9
8	12
15	19
Rule: _____	

In	Out
2	8
3	12
4	16
5	20
Rule: _____	

In	Out
10	7
15	12
25	22
38	35
Rule: _____	

Name: _____ 85

Curriculum Connection
C1.1, C1.2, C1.3

T-Tables – Finding Patterns

Questions | Fill in the T-Tables by counting the blocks

1) 
Figure 1 Figure 2 Figure 3

Figure	Term Value
1	
2	
3	
4	

2) 
Figure 1 Figure

Figure	Term Value
1	
2	
3	
4	

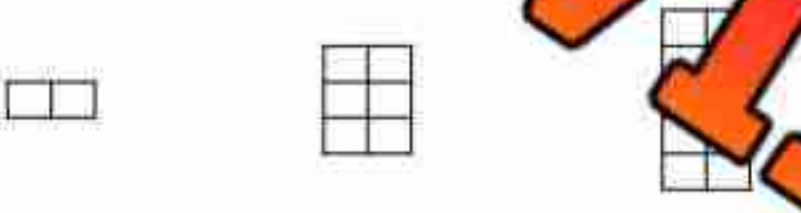
3) 
Figure 1 Figure 2 Figure 3

Figure	Term Value
3	
4	

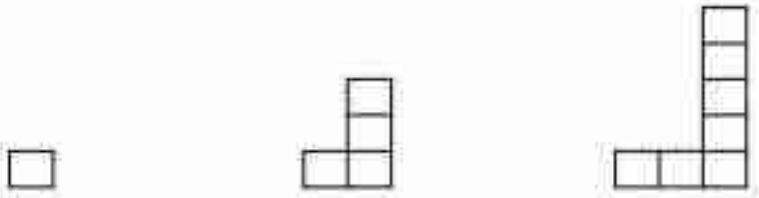
4) 
Figure 1 Figure 2 Figure 3

Fig	Value
1	
2	
3	
4	

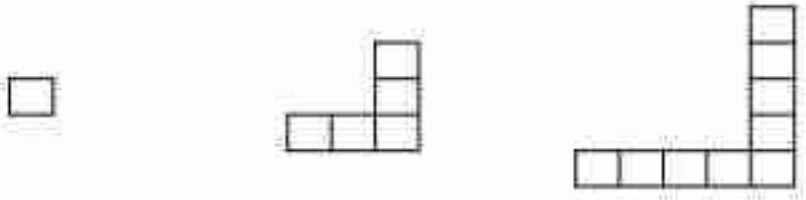
5) 
Figure 1 Figure 2 Figure 3

Figure	Term Value
1	
2	
3	
4	

Name: _____ 87

Curriculum Connection
C12, C13

Table of Values – Term Numbers/Values

Questions | Fill in the table of values below

Term Number	Term Value
1	1
2	3
3	5
4	
5	
6	

Term Number	Term Value
1	10
2	16
3	22
4	
5	
6	

Term Number	Term
1	75
2	71
3	67
4	
5	
6	

Term Number	Term Value
	89
	79
3	
5	
6	

Term Number	Term Value
1	242
2	250
3	
4	266
5	
6	
10	

Term Number	Term Value
1	545
2	540
3	
4	
5	525
6	
10	

Name: _____ 89

Curriculum Connection
C1.2, C1.3

Table of Values

Questions | Answer the questions below by using the table of values

When you work an hour, you get paid 10 dollars. Therefore, the input is the hours you work and the output is how much money you made.
Fill in the input/output table.

1) How many dollars will you make if you work 5 hours?

2) How many dollars will you make if you worked 10 hours?

Hours Worked	Money Made
1	
2	
3	
4	
5	
10	

Kids	Slices of Pizza
1	
2	
3	
4	
5	
10	

Having a birthday party for your [illegible] kids coming to the [illegible]. Each [illegible] 2 slices of pizza.

1) How many slices of pizza does your family need to order?

2) What if 10 kids show up to the party? How many slices of pizza will you order?

You scored 5 points in each basketball game this season. Fill in the table of values showing your game scores.

1) After your third game, how many points had you scored?

2) There were 8 games this season. How many points did you score in the season?

Games	Total Points Scored
1	
2	
3	
4	
5	
6	

Name: _____ 90

Curriculum Connection
CL3

The Egg Challenge

Challenge	Answer the word problem below

If a hen laid 1 egg on Monday, 2 eggs on Tuesday, 3 eggs on Wednesday and the pattern continued, how many eggs would it lay on the Sunday?

How many days would the hen need to la

Name: _____

Algebra Quiz - Patterning

Part 1 Continue the repeating patterns below by drawing 3 more pictures

Part 2 Circle the pattern unit once and continue the pattern

A B C C A B C _____, _____, _____

A B B C D A B B C D _____, _____, _____

A B C B A B C B _____, _____, _____

Part 3 Follow the rule by adding or subtracting to find the

1) (Add 5) 3, 8, 13, _____, _____, _____	2) (Add 3) 23, 26, 29, _____, _____, _____
3) (Add 6) 2, 8, 14, _____, _____, _____	4) (subtract 2) 18, 16, 14, _____, _____, _____
5) (subtract 10) 60, 50, 40, _____, _____, _____	6) (subtract 4) 46, 42, 38, _____, _____, _____

Part 4 T-Tables

Term Number	Term Value
1	4
2	8
3	12
4	
5	
6	

+4 +4 +4 +4 +4

Term Number	Term Value
1	89
2	79
3	69
4	
5	
6	

-10 -10 -10 -10 -10

3) Figure 1 Figure 2 Figure 3 Figure 4

Figure	Term Value
1	
2	
3	
4	

Part 5 Solve the word problem below. Show your work!

If you read 1 book on Monday, 2 books on Tuesday, 3 books on Wednesday, and so on, how many books would you read on Sunday if the pattern continued?

How many days would it take you to read 45 books?

Grade 3
C2. Equations and Inequalities

	Curriculum Expectations	Pages That Cover the Expectations
C2.1	describe how variables are used, and use them in various contexts as appropriate	110 – 114, 137 – 145, 151 – 155, 161 - 162
C2.2	determine whether given sets of addition, subtraction, multiplication, and division expressions are equivalent or not	95 - 162
C2.3	identify and use equivalent relationships for whole numbers up to 1000, in various contexts	163 - 164

Name: _____ 95

Curriculum Connection
C22

Pre-Algebra – Balancing Addition Equations

Balance the scales by putting the same amount of circles on each scale.

Answer: Add 6 circles to the scale to make them equal.

3	+	6	=	9

Question: How many balls do you need to add to balance the scales?

8	+		=	11

6	+		=	

8	+		=	14

5	+		=	9

7	+		=	12

2	+		=	13

6	+		=	10

3	+		=	14

1	+		=	12

Name: _____ 96

Curriculum Connection
C22

Pre-Algebra – Balancing Addition Equations

Balancing equations means both sides of the equal sign must be the same.

Examples: $3 + 7 = \boxed{10}$ (10) $\quad 24 + 6 = \boxed{30}$ (30)

Questions Fill in the missing number to balance the equation

1) 3 + ☐ = 5

2) 3 + 5 = ☐

3) 6 + 5 = ☐

4) 1 + ☐ = 7

5) 4 + ☐ = 10

6) 4 + ☐ = 11

7) ☐ + 8 = 12

8) ☐ + 6 = 13

9) ☐ + 7 = 12

10) ☐ + 1 = 9

11) 3 + ☐ = 8

12) 7 + 7 = ☐

13) ☐ + 8 = 16

14) 7 + ☐ = 11

15) 3 + 12 = ☐

Name: _____ 97

Curriculum Connection
C22

Addition to 100 – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal

15 + 7 = 22 28 + 4 ≠ 33 44 + 6 = 50

Questions Put a slash (≠) through the equal sign if it is not balanced

1) 15 + 5	2) 17 + 4 = 21	3) 23 + 7 = 29
4) 21 + 6 = 27	5) 1	6) 23 + 10 = 33
7) 19 + 6 = 26	8) 26 + 5 = 1	9) 7 = 46
10) 58 + 6 = 66	11) 61 + 5 = 66	12) 7 = 90
13) 60 + 10 = 70	14) 81 + 0 = 81	15) 84 + 3 = 88
16) 90 + 7 = 96	17) 94 + 5 = 99	18) 87 + 10 = 97

Name: _____ 99

Curriculum Connection C22

Pre-Algebra – Balancing Addition Equations

Balancing equations means both sides of the equal sign must be the same.

Examples: $3 + 7 = \boxed{10}$ (10) $\quad 24 + 6 = \boxed{30}$ (30)

Questions Fill in the missing number to balance the equation

1) 15 [ ]	2) 23 + 6 = [ ]	3) 54 + 5 = [ ]
4) 1 + [ ] = 8	[ ] = 15	6) 26 + [ ] = 32
7) [ ] + 6 = 10	8) [ ] 17 = 3	[ ] + 33 = 50
10) 35 + 13 = [ ]	11) 52 + [ ] = 61	[ ] 41
13) 124 + [ ] = 131	14) 96 + 5 = [ ]	15) 184 + [ ] = 197
16) 152 + [ ] = 162	17) 135 + 15 = [ ]	18) 113 + [ ] = 125
19) 144 + [ ] = 152	20) 118 + 12 = [ ]	21) 151 + [ ] = 165

Name: _____ 101

Curriculum Connection
C22

Addition Word Problems

Questions | Answer the questions below

1) Tom and his friend collected 35 seashells together. If Tom collected 18 seashells, how many did his friend collect?

2) There were [illegible] a t[illegible]me more birds arrived, and now there are 56 birds. How many [illegible] arrive[illegible]

3) A water tank had 75 liters of water. Some m[illegible] [illegible]d now it has 98 liters. How much water was added?

4) A bus started with 25 passengers. More people got on, and now there are 39 passengers. How many people got on?

Name: _____ 102

Curriculum Connection
C22

Pre-Algebra – Change Unknown

Balancing equations means both sides of the equal sign must be the same.

Examples:

$3 + \underset{10}{\underline{7}} = 10$ $22 + \underset{30}{\underline{8}} = 30$

Questions Fill in the missing number to balance the equation

1) 5 + _____ =	2) 3 + _____ = 7
3) 7 + _____	_____ = 14
5) 12 + _____ = 17	6) + _____ = 22
7) 18 + _____ = 25	8) 15 + _____
9) 13 + _____ = 18	10) 17 + _____ = 24
11) 25 + _____ = 32	12) 31 + _____ = 38
13) 44 + _____ = 51	14) 53 + _____ = 62

Name: _____ 103

Curriculum Connection
C22

Pre-Algebra – Start Unknown

Balancing equations means both sides of the equal sign must be the same.

Examples:

17
10 + 7 = 17

30
7 + 23 = 30

Questions Fill in the missing number to balance the equation

1) _____ =	2) _____ + 2 = 8
3) _____ + 6 =	_____ + 5 = 7
5) _____ + 9 = 13	6) _____ 13
7) _____ + 7 = 15	8) _____ +
9) _____ + 6 = 24	10) _____ + 5 = 28
11) _____ + 5 = 25	12) _____ + 7 = 32
13) _____ + 11 = 43	14) _____ + 13 = 48

Name: _____ 105

Curriculum Connection
C22

Algebra Jeopardy

Objective What are we learning about?

To reinforce students' understanding of basic algebraic concepts and their application to solve simple equations and word problems in a fun and competitive game for

Mat will need for the activity.

- Jeopardy b the n
- Buzzer or bell

Instructions How you will comp activ

1. Print the Jeopardy board on the next pa
2. Divide the class into two teams.
3. Ask one team to go first by selecting a dollar value.
4. Read the question aloud from the dollar value.
5. The first team to ring the bell or buzzer gets to answer.
6. If they answer correctly, award them the points. If not, another team can answer.
7. Continue the game until all questions have been answered.
8. Tally the points to determine the winning team.
9. Conclude by discussing what they learned about the topic in the questions.

Name: ______________________ 106

Curriculum Connection C2.2

Jeopardy Questions | Ask students the questions below

$100	$200	$300	$400	$500
__ + 3 = 5	__ + 7 = 20	10 + __ = 45	20 + __ + 15 = 68	3 + __ = 7 + 5
__ + 15 = [illegible]	[illegible] + 12 = 29	18 + __ = 53	25 + 18 + __ = 100	__ + 18 = 50 + 13
7 + __ = 10	[illegible]	[illegible] + __ = 65	32 + 25 + __ = 95	4 + __ = 11 + 9
__ + 6 = 9	__ + 20 = 4[illegible]	[illegible]	[illegible] + 22 + __ = 58	29 + __ = 12 + 47
Sam has 6 marbles and finds 11 more. How many does he have now?	Lisa had $21 and earned $10 more. Total money?	Max had 30 pencils, he [illegible] bought 26 more. How many total pencils does he have now?	[illegible] bir[illegible] [illegible]ore joi[illegible] many no[illegible] on the tree?	[illegible] farmer had 62 [illegible] and bought [illegible] mo[illegible] How [illegible]ws [illegible]ve?
If Alex has 12 apples and buys 12 more, how many does he have?	Jane had 24 candies and found 13 more. How many does she now have in total?	Tom read 33 pages, then read 22 more. How many total pages did he read?	Lily collected 41 seashells, then 23 more. How many total does she have now?	If a baker baked 68 pies and then baked 24 more, how many pies are there?

Name: _____ 108

Curriculum Connection
C22

Addition – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation.

Example:

4 + 7 | (9 + 2) | 5 + 5

Questions: Circle the equation that matches the shaded in equation

1)	25 +	16 + 12	24 + 5
2)	46 + 6	40	44 + 3
3)	52 + 14	57 + 18	61 + 5
4)	63 + 12	45 + 35	
5)	82 + 12	70 + 24	55 + 40
6)	68 + 13	75 + 7	61 + 20
7)	53 + 22	40 + 35	55 + 21

Name: _____ 109

Curriculum Connection
C22

Addition – Using Symbols

When we do not know the value of an addend in a question, we can use any symbol to replace the unknown.

Part 1 Find out the value of the symbol

1) 35 + ◆ = 50 ◆ =	2) 17 + ● = 24 ● =	3) ● + 42 = 55 ● =
4) 27 + ◆ = [illegible] ◆ =	[illegible] 11 = 16 ● =	6) 65 + ● = 75 ● =
7) ◆ + 88 = 98 ◆ =	8) 51 + ◆ = 62 ◆ =	[illegible] ● + 72 = 81 ● =

Part 2 Write your own questions using any symbol you want [illegible] to answer.

1)	2)

Name: _____ 112

Curriculum Connection
C2.1, C2.2

Using Variables to Solve Addition Equations

There are some instances where we know the values of variables and need to plug them into an equation. For example:

a + b + c = ? a = 5 b = 3 c = 7

5 + 3 + 7 = 15

Questions: Find out the value of the variable

a + b + [illegible] = [illegible] 8 c = 2 _____ + _____ + _____	n + y + t = n = 5 y = 10 t = 5 _____ + _____ + _____ = _____
c + r + p = c = 4 [illegible] 12 _____ + _____ + _____ = _____	[illegible] k = g = 8 h = 4 k = 8 _____ + _____ + _____ = _____
e + c + g = e = 13 c = 7 g = 10 _____ + _____ + _____ = _____	[illegible] c = [illegible] b = 8 c = 3 _____ + _____ + _____
a + b + c = a = 5 b = 12 c = 12 _____ + _____ + _____ = _____	n + y + t = n = [illegible] 5 _____ + _____ + _____ = _____
c + r + p = c = 4 r = 8 p = 21 _____ + _____ + _____ = _____	g + h + k = g = 8 h = 10 k = 10 _____ + _____ + _____ = _____
e + c + g = e = 13 c = 15 g = 10 _____ + _____ + _____ = _____	a + b + c = a = 5 b =15 c = 20 _____ + _____ + _____ = _____

Name: _____ 113

Curriculum Connection
C2.1, C2.2

Word Problems – Writing Addition Equations

Questions | Answer the questions below

1) Steve and James love video games. Steve has 8 games. Steve and James have 18 games in total. Which equation will tell us how many games James has?

j + 8 = 18	8 + 18 = j
8 + j = 18	8 – j = 18

2) Jen and Rebecca were making cookies. Rebecca made 20 cookies. They made 50 total cookies. Which equation will tell us how many cookies Jen made?

	50 + c = 20
20	c – 20 = 50

3) Scott and Luke love hockey cards. Scott has 25 cards and Luke has 50 cards. Which equation will tell us how many total cards they have?

c + 25 = 50	
25 + c = 50	

4) Adam and Henry went Trick or Treating. Henry got 62 candies. They got 121 candies in total? Which equation will tell us how many candies Adam got?

62 + c = 121	62 + 121 = c
c + 62 = 121	62 – c = 121

5) Sam scored 15 points in his basketball game. He had 5 points in the first half. Which equation will tell us how many points he had in the second half?

p + 5 = 15	5 + 15 = p
5 – p = 15	5 + p = 15

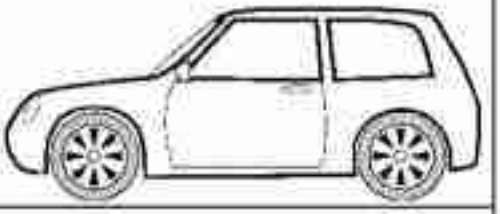
Name: _____ 114

Curriculum Connection
C2.1, C2.2

Word Problems – Solving Addition Equations

Questions | Answer the questions below

1) Tim drove 31km to get to work. Then he drove to the store. When he got to the store, he had driven 58 km in total. How many km did he drive to the store?



2) Steve got 25 points f[illegible] leve[illegible] ideo game. He got 33 more points for beating level 2. How ma[illegible] p[illegible] ave after level 2?

Bonus – He had 78 total points after beating level [illegible] ny p[illegible] did he get in level 3?

3. In badminton, Jessica and Erin won their game. They scored 21 points and their opponents only scored 16. Jessica scored 13 of the 21 points. How many points did Erin score?

Name: _____ 115

Curriculum Connection
C22

Pre-Algebra – Balancing Subtraction Equations

Balance the scales by taking away circles from the scale.

Answer: take 4 circles from the scale to make them equal.

7	-	4	=	3

Instruction How many balls do you need to take away to balance the scales?

11	-		=	8

8			=	

10	-		=	4

8	-		=	1

11	-		=	3

13	-		=	2

10	-		=	4

14	-		=	1

4	-		=	0

Name: _____ 116

Curriculum Connection
C22

Activity Title: Balancing Act

Objective

What are we learning about?

This activity is designed to help students understand the concept of equality and balance in addition and subtraction equations using a physical balance scale. Students will explore how different weights can represent numbers and discover combinations that balance the scale.

Materials

What you will need for the activity.

- Small balance scale
- A set of weighted objects with the same weights. A minimum of 25 grams
- Paper
- Pencils
- Set of pre-written addition and subtraction problems

Instructions

How you will complete the activity

1. Give a balance scale and weights to small groups of students.
2. Provide the students with the set of equations on the next page.
3. Students must use the weights to represent the numbers in each equation and place them on the balance scale to see how they balance. For the subtraction questions, students will put on the first quantity, and then remove the quantities in the equations. For addition, they can put the addends in separate areas on the same side of the balance scale.
4. As an extension, students could create their own equations that represent a sum or difference that you provide them with.
5. Review each group's findings with the class, discussing why the particular combinations resulted in a balanced scale.

Name: _____ 117

Curriculum Connection
C22

Equations | Pre-written addition and subtraction problems

3 + 2 = 5	11 – 4 = 7
7 – 2 = 5	4 + 2 = 3 + 3
5 + 4 = 7 + 2	19 – 15 = 4
8 – 4 – 2 = 2	19 – 7 – 8 = 8 – 2 – 2
7 + 2 + 1 = 9 + 1	6 + 1 + 3 = 4 + 2 + 4

Name: _____ 118

Curriculum Connection
C22

Subtraction to 50 – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal

14 - 3 = 11 22 - 3 ≠ 18 36 - 5 = 31

Questions: Put a slash ≠ through the equal sign if it is not balanced

1) 13 - [illegible]	2) 24 - 4 = 20	3) 15 - 4 = 10
4) 16 - 3 = 12	5) [illegible]	6) 18 - 3 = 14
7) 22 - 5 = 17	8) 26 - 6 = [illegible]	9) [illegible] 3 = 20
10) 28 - 5 = 23	11) 31 - 3 = 27	12) 3[illegible] = 30
13) 36 - 5 = 31	14) 39 - 4 = 34	15) 37 - 4 = 33
16) 44 - 0 = 44	17) 46 - 6 = 41	18) 50 - 5 = 45

Name: _____ 121

Curriculum Connection
C22

Pre-Algebra – Balancing Subtraction Equations

Balancing equations means both sides of the equal sign must be the same.

Examples:

$15 - 6 = \boxed{9}$ (9)

$27 - 6 = \boxed{21}$ (21)

Questions Fill in the missing number to balance the equation

1) 15 - ☐ = 9	2) 11 - 6 = ☐	3) 10 - 5 = ☐
4) 10 - ☐ = 5	5) ☐ - 2 = 6	6) 14 - ☐ = 10
7) ☐ - 6 = 10	8) ☐ - 5 = 12	9) ☐ - 8 = 12
10) 55 - 10 = ☐	11) 72 - ☐ = 65	12) ☐ - 50
13) 74 - ☐ = 67	14) 112 - 6 = ☐	15) 180 - ☐ = 160
16) 143 - ☐ = 135	17) 115 - 15 = ☐	18) 125 - ☐ = 110
19) 106 - ☐ = 99	20) 125 - 21 = ☐	21) 145 - ☐ = 100

Name: _____ 122

Curriculum Connection
C22

Pre-Algebra – Result Unknown

Balancing equations means both sides of the equal sign must be the same.

Examples:

$10 - 7 = \underline{3}$ (3)

$24 - 18 = \underline{6}$ (6)

Question: Find the missing number to balance the equation

1) 15 - 5 = _____	2) 25 - 7 = _____
3) 10 - 4 = _____	4) 13 = _____
5) 21 - 7 = _____	6) 24 = _____
7) 32 - 12 = _____	8) 42 – 7 = _____
9) 63 - 13 = _____	10) 79 - 15 = _____
11) 91 - 11 = _____	12) 122 - 9 = _____
13) 142 - 13 = _____	14) 166 – 15 = _____

Name: _____ 124

Curriculum Connection
C22

Pre-Algebra – Start Unknown

Balancing equations means both sides of the equal sign must be the same.

Examples:

$17 - \overset{10}{7} = 10$ $30 - \overset{7}{23} = 7$

Question: Find the missing number to balance the equation

1) _____ - [illegible]	2) _____ - 4 = 7
3) _____ - 5 = 10	4) _____ - 3 = 8
5) _____ - 7 = 13	6) _____ - 6 = 2
7) _____ - 4 = 15	8) _____ - [illegible]
9) _____ - 6 = 24	10) _____ - 5 = 25
11) _____ - 8 = 25	12) _____ - 9 = 40
13) _____ - 12 = 43	14) _____ - 13 = 62

Name: _____ 131

Curriculum Connection
C22

Subtraction – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation.

Example:

9 - 4 (8 - 3) 10 – 6

Question: Circle the equation that matches the shaded in equation

1)		24 - 13	27 – 15
2)	28 - 14		27 – 13
3)	30 - 12	39	39 – 21
4)	47 - 12	46 - 11	
5)	62 – 13	61 - 12	63 - 15
6)	85 - 15	90 - 15	90 – 20
7)	99 - 15	98 - 13	90 - 6

Name: _____ 132

Curriculum Connection
C22

Matching Game: Do The Equations Match

Objective What are we learning about?

To enhance students' understanding of equality within addition and subtraction equations. Students will identify and match pairs of equations that yield the same result, fos ing critical thinking and problem-solving skills in a collaborative group se

Mate will need for the activity.

- Pre-prepare ore-c cards.
- Small bags or envel ld t ts for each group

Instructions How you will complete the a

1. Before the class, the teacher will cut out the p ed m g game cards.
2. Divide the students into small groups and give each group elope containing a set of the matching cards.
3. In their groups, students will spread out the cards face down on their table.
4. Each person takes a turn to try to match two cards. They will need to solve both equations to see if they match (equal the same).
5. If they find a correct match, they keep the cards out and continue with their next turn. If the cards don't match, they turn them back over in the same place, and the next player takes a turn.
6. The activity continues until all pairs are correctly matched within each group.

Name: _____ 135

Curriculum Connection
C22

Cards | Matching Game Cards

19 + 18	30 + 7
9[illegible]5	68 - 3
42 + 18	[illegible] + 5
90 - 45	75 - 3[illegible]
64 + 18	73 + 9

Name: _____ 136

Curriculum Connection
C22

Subtraction – Using Symbols

Part 1 Find out the value of the symbol

1) ● – 10 = 18 ● =	2) 42 – ▲ = 30 ▲ =	3) 80 – ● = 65 ● =
4) [illegible] 12 ▲ =	5) ◆ – 11 = 29 ◆ =	6) 90 – 70 = ◆ ◆ =
7) 54 – ▲ = 50 ▲ =	8) [illegible] ● =	9) 78 – ● = 64 ● =

Part 2 Write your own questions using any sym[illegible]ant. T[illegible]et a friend to answer.

1)	2)
3)	4)

Name: _____ 137

Curriculum Connection
C2.1, C2.2

Subtraction – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: 18 - n = 5

We can figure out the unknown number by balancing the equation.
In this equation, n = 13.

Question: Figure out the value of the variable

27 - n = 13 n =	n - 5 = 5 n =	22 - n = 10 n =
25 - 10 = p p =	1[illegible] p =	p - 8 = 15 p =
31 - y = 30 y =	y - 14 = [illegible] y =	[illegible]35 = y y =
65 - t = 51 t =	88 - t = 58 t =	[illegible] t =
124 - a = 117 a =	150 - a = 135 a =	163 - a = 151 a =
176 - 165 = s s =	185 - s = 171 s =	124 - s = 99 s =

Name: _____ 140

Curriculum Connection
C2.1, C2.2

Word Problems – Solving Subtraction Equations

Questions | Answer the questions below

1) Mrs. Wilson had 48 pencils at the start of the school year. She gave all the kids in her class 1 pencil. She now has 28 pencils. How many students are in Mrs. Wilson's class?

2) Hudson saved 86 dollars and bought a toy for 35 dollars. How many dollars does he have left?

Bonus: He saved 15 more dollars. Can he buy a new game for 60 dollars?

3) The grade 3 class planted 79 tomato seeds but only 57 tomato plants grew. How many plants did not grow?

Name: _____ 141

Curriculum Connection
G2.1, G2.2

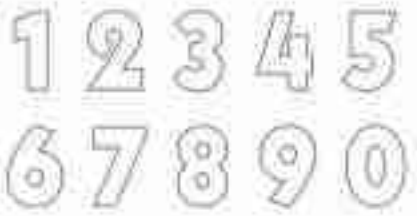
Task Cards: Mystery Number Detectives

Objective — What are we learning about?

To help students understand and solve one-step algebraic equations by finding the value of a missing number.

Materials — What you will need for the activity.

- [illegible]
- Separate sheet[illegible] for answers
- Pencils



Instructions — How [illegible] activity

1. Introduce the concepts cove[illegible]d in [illegible]
2. Organize the students into pairs and provide e[illegible]ir sets of task cards.
3. Give each pair an answer recording sheet [illegible]do[illegible]ses.
4. Encourage teamwork by having students collabora[illegible]ir p[illegible]on finding solutions.
5. Allow students to select any task card to begin with, emphasiz[illegible]an complete the cards in any order they prefer.
6. Instruct students to record the letter of their chosen answer (A, B, or C) on their answer sheet beside the task card's number.
7. Consider using a timer to create a dynamic challenge, adjusting the duration to fit the lesson's objectives and complexity.
8. After the activity, review the answers collectively, discussing any challenging questions and strategies used to solve them.
9. Have students reflect on the activity, sharing the methods they applied and obstacles they overcame.

Name: _____ 142

Curriculum Connection
G2.1, G2.2

Task Cards | Cut out the task cards below

Card 1:
14 – p = 10

solve for p
a) [illegible] b) 4 c) 5

Card 2:
80 – = 65

solve for 
a) 15 b) 25 c) 35

Card 4:
x + 45 = 76

solve for x
[illegible] b) 31 c) 41

Card 5:
31 + y = 58

solve for y
a) 17 b) 27 c) 37

Card 7:
18 - a = 9

solve for a
a) 9 b) 7 c) 11

Card 8:
b + 16 = 24

solve for b.
a) 8 b) 18 c) 28

Name: _____ 145

Curriculum Connection
C2.1, C2.2

Task Cards: Mystery Number Detectives

Answers | Record your answers below

1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	

13	
14	
15	
16	
17	
19	
20	
21	
22	
23	
24	

Name: _____ 148

Curriculum Connection
C22

Multiplication – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation

Example

2 x 3	1 x 6	4 x 2

Question

Circle the equation that matches the shaded in equation

1)		10 x 1	6 x 2
2)	6 x 3		2 x 9
3)	5 x 4	1	6 x 3
4)	8 x 2	4 x 4	
5)	9 x 4	7 x 5	6 x 6
6)	10 x 3	7 x 5	6 x 5
7)	8 x 3	6 x 4	7 x 3

Name: _____ 149

Curriculum Connection
C22

Multiplication Word Problems

Questions	Answer the questions below

1) Claire has 7 boxes of cookies. She has 56 cookies in total. How many cookies are in each box?

2) Sam is a t[illegible] he d[illegible]00 km per hour. In total, he drove 800 km yesterday. How [illegible]ours [illegible]e?

3) Courtney scored 3 goals in each game she p[illegible]es [illegible]scored 27 goals in total. How many games did she play?

4) Steven earned $8 every hour he worked. He made $48 today. How many hours did he work?

Name: _____ 150

Curriculum Connection
C22

Multiplication – Using Symbols

Part 1 Find out the value of the symbol

1) ● x 3 = 12	2) 5 x ▲ = 45 ▲ =	3) 4 x ● = 32 ● =
4) x 9 = ▲ =	5) ◆ x 4 = 40 ◆ =	6) 7 x 10 = ◆ ◆ =
7) 2 x ▲ = 40 ▲ =	8) ● =	9) 10 x ● = 110 ● =

Part 2 Write your own questions using any symbol you ... n q... ...nd ... answer.

1)	2)
3)	4)

Name: _____ 151

Curriculum Connection
C2.1, C2.2

Multiplication – Find the Variable

When we multiply a number by a variable, we do not need to use the multiplication sign. It is known that any variable next to a number means the operation we are using is multiplication.

Example: 5n = 15 means 5 x n = 15

We can figure out the unknown number by balancing the equation: n = 3.

Questi | Find out the value of the variable

	n x 5 = 20 n =
10 x 1 = p p =	5p = 30 p =
10n = 30 n =	[illegible] n =
2n = 16 n =	8 x [illegible] t =
5n = 45 n =	10n = 100 n =
10s = 50 s =	5 x 7 = s s =

Curriculum Connection
C2.1, C2.2

Activity – Equation Explorers

Objective | What are we learning about?

To help students understand and solve one-step equations [illegible]sing symbols to represent unknown values.

Materia[illegible] | [illegible] you will need for the activity.

- Small whi[illegible] she[illegible] paper
- Dry erase [illegible] or pe[illegible]
- A set of equati[illegible]rds [illegible]tep equations like 3n = 6)
- Tokens or small re[illegible]

Instructions | How you will comp[illegible] acti[illegible]

1. Begin the activity by explaining what a o[illegible]p e[illegible] demonstrate a few examples on the board. Explain that the [illegible]e x) s[illegible] for an unknown value that we need to find.
2. Distribute a paper and pencil to each student.
3. Hand out one equation card to each student. Ensure the questio[illegible]y but remain simple enough to solve in one step.
4. Give the students a few minutes to solve the equation on their cards, writing the solution on their paper.
5. Once everyone has a solution, ask students to swap their boards or papers with a partner to check each other's work.
6. Discuss as a class some of the solutions, especially any that were tricky or where mistakes were made, to clarify the correct methods.
7. For correctly solved equations, award tokens or small rewards to encourage participation and effort.

Name: _____ 155

Curriculum Connection
C2.1, C2.2

Multiplication Equations Cut out the questions below and distribute to each student.

12a = 36	11b = 44	15c = 45
13d = 52	14e = 56	16f = 64
	17h = 68	19i = 76
12j = 4	k = 39	11l = 33
15m = 60	2 6d	21o = 63
22p = 66	25q =	= 72
23s = 46	19t = 57	
16v = 64	17w = 51	14x = 42
13y = 39	21z = 84	22a = 44
20b = 100	12c = 36	15d = 75

Name: _____ 156

Curriculum Connection
C22

Division – Are They Equal?

Are the equations equal? Put a slash through the equal sign for any equations that are not equal

$4 \div 2 \neq 1$ $6 \div 2 = 3$ $10 \div 2 \neq 8$

Question	Put a slash through the equal sign (≠) if it is not balanced

1)	2) $10 \div 10 = 10$
3) $5 \div$	4) $8 \div 2 = 4$
5) $10 \div 5 = 2$	$\div 1 = 2$
7) $10 \div 5 = 50$	$\div$
9) $20 \div 5 = 4$	10) $25 \div 5 = 6$
11) $50 \div 10 = 5$	12) $16 \div 2 = 7$
13) $20 \div 10 = 2$	14) $15 \div 5 = 5$

Name: _____ 157

Curriculum Connection
C22

Pre-Algebra – Balancing Division Equations

Balancing equations means both sides of the equal sign must be the same.

Examples:

$15 \div 3 = \boxed{5}$ (5)

$\boxed{10} \div 2 = 5$ (5)

Questions Fill in the missing number to balance the equation

1) 8	2) $6 \div 3 =$ ☐
3) $10 \div$ ☐ $= 5$	4) $6 \div$ ☐ $= 2$
5) ☐ $\div 5 = 5$	6) ☐
7) $5 \div 1 =$ ☐	8) $20 \div$ ☐
9) $15 \div$ ☐ $= 3$	10) $10 \div 10 =$ ☐
11) $25 \div$ ☐ $= 5$	12) $30 \div 6 =$ ☐
13) $10 \div$ ☐ $= 2$	14) $18 \div 2 =$ ☐

Name: _____ 158

Curriculum Connection
C22

Division – Which Equation Matches?

Two of the equations equal the same number. Which one matches the shaded in equation

Example

12 ÷ 4 | 9 ÷ 3 | 16 ÷ 4

Question			
	Circle the equation that matches the shaded in equation		
1)	20 ÷	10 ÷ 5	15 ÷ 3
2)	18 ÷ 6		6 ÷ 3
3)	16 ÷ 4	14 ÷ 7	28 ÷ 7
4)	25 ÷ 5	10 ÷ 2	
5)	28 ÷ 7	21 ÷ 3	8 ÷ 2
6)	18 ÷ 3	30 ÷ 5	25 ÷ 5
7)	24 ÷ 3	16 ÷ 2	12 ÷ 6

Name: _____ 160

Curriculum Connection
C22

Division – Using Symbols

Part 1 Find out the value of the symbol

1) ● ÷ 3 = 5	2) 25 ÷ ▲ = 5 ▲ =	3) 40 ÷ ● = 8 ● =
4) ÷ 2 = ▲ =	5) ◆ ÷ 6 = 4 ◆ =	6) 50 ÷ 10 = ◆ ◆ =
7) 42 ÷ ▲ = 6 ▲ =	8) =	9) 90 ÷ ● = 9 ● =

Part 2 Write your own questions using any symbol you [illegible] answer.

1)	2)
3)	4)

Name: _____ 161

Curriculum Connection
C2.1, C2.2

Division – Find the Variable

A **variable** is a letter that represents an unknown number. When we don't know a number, we can use a letter to take the place of the unknown number.

Example: 15 ÷ n = 3

We can figure out the unknown number by balancing the equation: n = 5.

Quest

Find out the value of the variable

	n ÷ 5 = 3 n =
10 ÷ 1 = p p =	20 ÷ p = 2 p =
10 ÷ n = 2 n =	n
30 ÷ n = 10 n =	8 ÷ t t =
50 ÷ n = 5 n =	10 ÷ n = 10 n =
10 ÷ s = 2 s =	20 ÷ 4 = s s =

Name: _____

Algebra Quiz - Equations

Part 1 Put an x through the equal sign if it is not balanced

1) 15 + 10 = 25	2) 20 + 10 = 30	3) 56 + 5 = 71
4) [illegible] 10	5) 10 - 4 = 6	6) 16 - 5 = 12

Part 2 [illegible] missing number to balance the equation

1) 15 + 8 = ☐	[illegible] = 21	3) 9 + ☐ = 15
4) 25 + 5 = ☐	5) ☐ + 12 [illegible]	[illegible] + ☐ = 28
7) 15 - 8 = ☐	8) ☐ - 8 = 12	10 [illegible] ☐
10) 21 - 5 = ☐	11) ☐ - 4 = 16	12) 32 - 15 = ☐
13) 5 x 2 = ☐	14) 10 x ☐ = 30	
15) 25 ÷ ☐ = 5	16) 30 ÷ 6 = ☐	

Part 3 Find out the value of the variable

7 + n = 10 n =	n - 5 = 5 n =	2 x n = 10 n =	20 ÷ n = 10 n =
n + 16 = 22 n =	n - 3 = 6 n =	n x 5 = 15 n =	12 ÷ 4 = n n =

Part 4 [illegible]e value of the variable

a + b + c = [illegible] b [illegible] c = 2 ____ + ____ + ____	n + y + t = n = 5 y = 10 t = 5 ____ + ____ + ____ = ____
a - b = c a = 13 b = [illegible] ____ + ____ = ____ c =	[illegible] e = 26 n = 6 ____ ____ ____ [illegible]
a x b = c a = 5 b = 5 ____ x ____ = c c =	r ÷ y = [illegible] r = 6 [illegible] 2 ____ ÷ ____ = k k =

Part 5 Solve the word problem below. Make sure to write the equation

Alexa saved 52 dollars from her allowance. She was given some money from her grandmother for her birthday. She now has 78 dollars. How much did her grandmother give her?

Grade 3
C3. Coding

	Curriculum Expectations	Pages That Cover the Expectations
C3.1	Solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential, concurrent, and repeating events	168 – 181, 190 - 191
C3.2	read and alter existing code, including code that involves sequential, concurrent, and repeating events, and describe how changes to the code affect the outcomes	182 – 189, 191 - 199

Name: _____ 168

Curriculum Connection
CS.1

Writing Code

Writing Code – Code Bank
go right (# of spaces)
go left (# of spaces)
go down (# of spaces)
go up (# of spaces)
open door

1. Write the code that gets the robot to the door

Line 1: _____

Line 2: _____

Line 3: _____

Robot moved _____ squ

2. Write the code that gets the r[illegible] to th[illegible] home.

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Robot moved _____ squares

3. Write the code that gets the robot to the gym and then home.

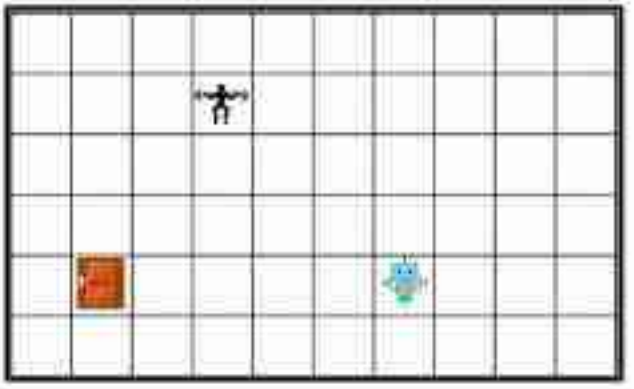
Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____



Robot moved _____ squares

Name: _____ 170

Curriculum Connection
C3.1

Reading Code – Creating Programs

Question	Read the code and create the program

Example

Code

go right
go down
open

Robot moved _____ squares

1.

Code

go down 2
go right 1
go down 2
go right 5
open door

Robot moved _____ squares

2.

Code

go right 2
go down 3
go left 2
go down 1
go right 6
open door

Robot moved _____ squares

Name: _____ 172

Curriculum Connection
CS.1

Reading Code – Creating Programs

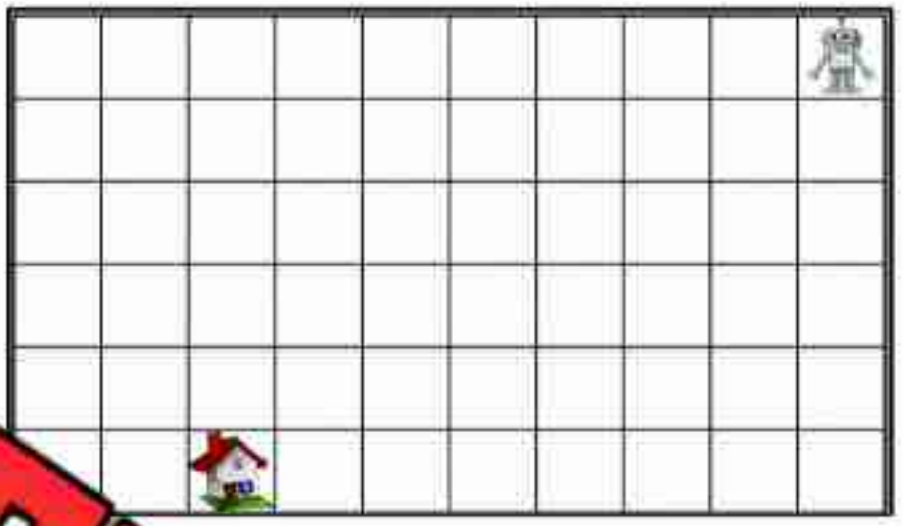
Question Read the code and draw the path the robot will take

1.

Code

go left 3
go [illegible]
go [illegible]
[illegible]

Robot moved _____ squares



2.

Code

go down 3
go right 2
enter school
go down 2
go right 4
open door

Robot moved _____ squares

3.

Code

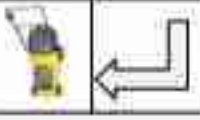
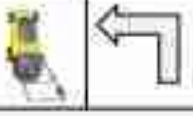
go down 3
go left 5
enter ice cream shop
go left 4
go up 4
open door

Robot moved _____ squares

Name: _____ 177

Curriculum Connection
C3.1

Coding – Robot Lawn Mower

This is a self-driving lawn mower	Right makes it turn right	Left makes it turn right	Forward makes the car move forward by the number shown
			
It unde… co…	**Right**	**Left**	**Forward 2**

Directions …de … the lawn mower to cut the field of grass

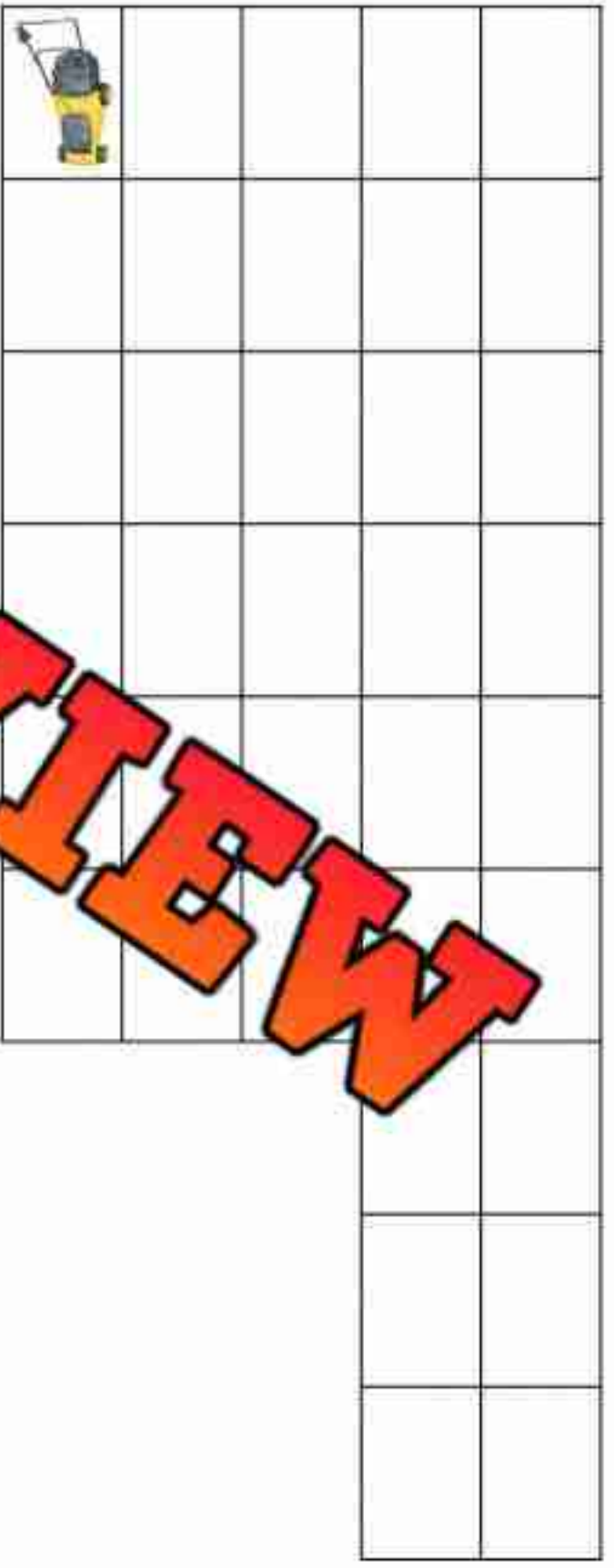
Codes – Forwar… …ht
Line 1
Line 2
Line 3
Line 4
Line 5
Line 6
Line 7
Line 8
Line 9

Name: _____ 178

Curriculum Connection
C21

Directions Write code to get the lawn mower to cut the field of grass

Codes – Forward, Turn Left, Turn Right	
Line 1	
Line 2	
Line 3	
Line 4	
Line 5	
Line 6	
Line 7	
Line 8	
Line 9	
Line 10	
Line 11	
Line 12	
Line 13	
Line 14	
Line 15	
Line 16	
Line 17	
Line 18	
Line 19	
Line 20	
Line 21	



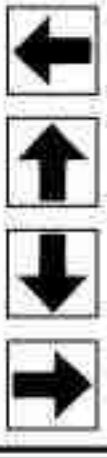
Name: _____ 179

Curriculum Connection
CCSS

Writing Code – Robotic Bees

Honeybees pollinate about 80% of plants worldwide. The problem is that since 1947, we have lost 60% of our honeybees. Robotic scientists are working to solve this problem by designing robotic bees that can pollinate plants.

Direction Use the arrows to move the bee to each of the flower so it can pollinate them. Use as few moves as you can.



1	2	3	4	5	6	7	8	9	10

11	12	13	14	15	16	17	18	19	20

Name: _____ 182

Curriculum Connection
C12

Fixing Code

Question Put the scrambled code in the correct order by labelling the steps 1-6

1. Go to school and then home

Code

_____ - go up 1
_____ - [illegible] 5
_____ - [illegible]
_____ - [illegible]
_____ - go left 1
_____ - enter home

2. Go to school and then [illegible]

Code

_____ - go up 2
_____ - go down 4
_____ - go right 3
_____ - enter school
_____ - go left 1
_____ - enter home

3. Go to school and then home

Code

_____ - go down 2
_____ - go down 3
_____ - go right 2
_____ - enter school
_____ - go left 3
_____ - enter home

Name: _____ 183

Curriculum Connection
C12

Fixing Code

Question Put the scrambled code in the correct order by labelling the steps 1–6

1. Go to the ice cream shop and then home

Code

_____ - go up 1

_____ - go right 1

_____ - [illegible]

_____ - [illegible]

_____ - [illegible]

_____ - go left 1

2. Go to the ice cream [illegible] then home

Code

_____ - go up 2

_____ - go left 1

_____ - enter home

_____ - enter ice cream shop

_____ - go up 1

_____ - go right 3

3. Go to the ice cream shop and then home

Code

_____ - go up 2

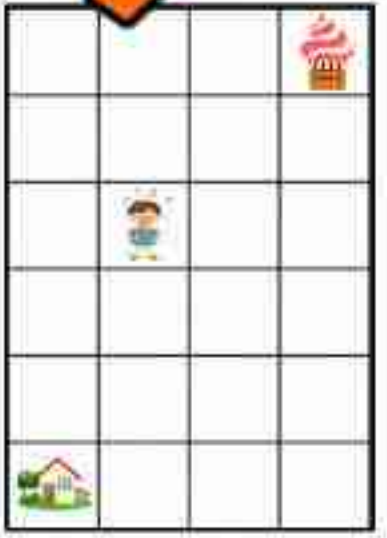
_____ - go down 5

_____ - go right 2

_____ - enter ice cream shop

_____ - go left 3

_____ - enter home



Name: _____ 187

Curriculum Connection
C12

Working with Code

Question Read the code and write what will happen. The first one is done for you

1.

Code

Code1 = "VE"

Code2 = "LO"

[illegible] = "ER"

[illegible]

[illegible]

print ("I [illegible]

The Computer Program:

I LOVE CODE

2.

Code

Code1 = "F"

Code2 = "UN"

Code3 = "TH"

Code4= "MA"

Code5= "IS"

print ("I think", Code4,Code3, Code5, Code1,Code2)

[illegible]mputer Program:

3.

Code

Code1 = "A"

Code2 = "PRO"

Code3 = "MER"

Code4= "GRAM"

Code5= "ING"

print ("I am", Code1, Code2,Code4,Code3)

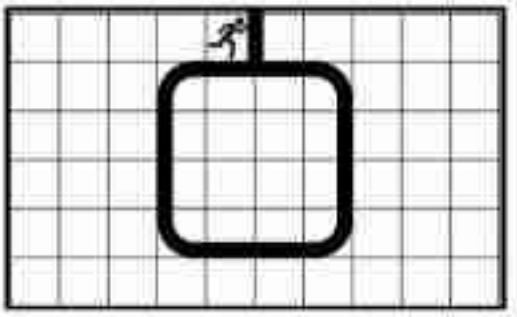
The Computer Program:

Name: _____ 190

Curriculum Connection
CS1

Writing Code - Loops

Writing Code – Code Bank
go right (# of spaces)
go left (# of spaces)
go down (# of spaces)
go up (# of spaces)
loop ___ times

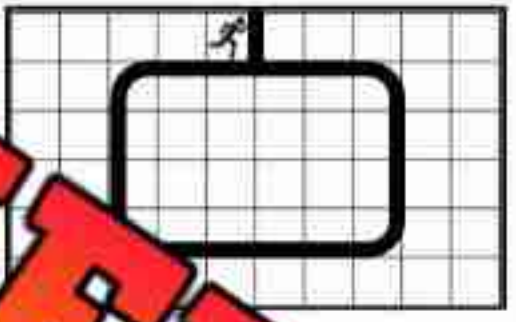


Example
go right 3
go down 5
go left 5
go up 5
go right 2
loop 5 times
go right 1

Question ...code that sends the runner around the track

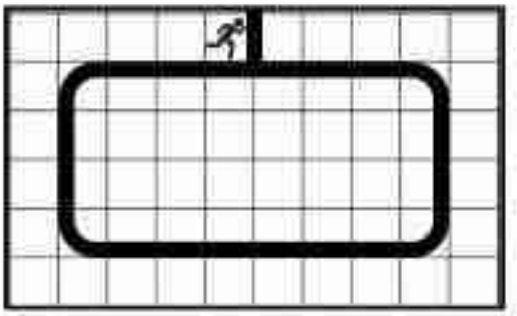
1. Use a ...o send ... around the track 5 times. (Don't forget to cross the finish line!)

Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____
Line 5: _____
Line 6: _____
Line 7: _____



2. Use a loop to send the runner around the track 3 times. (Don't forget ... finish line!)

Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____
Line 5: _____
Line 6: _____
Line 7: _____



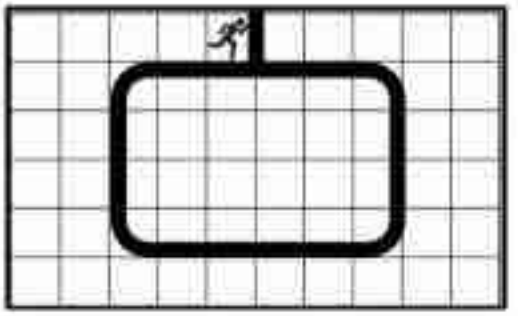
Name: _____ 191

Curriculum Connection
C2.1, C2.2

Writing Code - Loops

1. Use a loop to send the runner 600 metres.

Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____
Line 5: _____
Lin_____
Line 7: _____

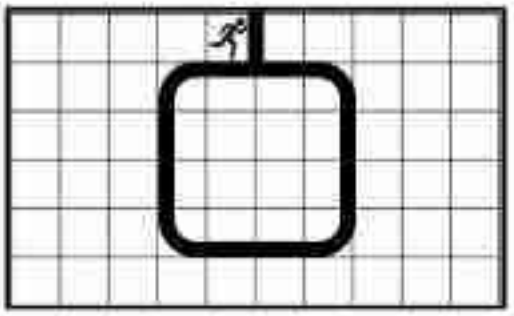


1 lap = 100 metres

2. Use a loop to send t_____00 m

Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____
Line 5: _____
Line 6: _____
Line 7: _____

1 lap = 20_____tres



1 lap = 10 metres

3. Read the code and figure out how far the runner went.

Code

```
loop 12 times
        go right 3 spaces
        go down 5 spaces
        go left 5 spaces
        go up 5 spaces
        go right 2 spaces
go right 1 space
run program
```

My Answer

Name: _____ 192

Curriculum Connection
C12

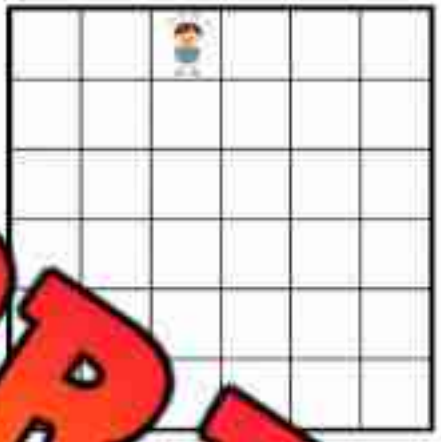
Interpreting Code

Question Will the code work? Circle yes or no. Re-write any code that won't work

1.

Code

go down 5
go right 2
enter li



YES NO

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

2.

Code

loop 4 times
  go down 1
  go right 1
enter library

YES NO

Line 1: _____

Line 2: _____

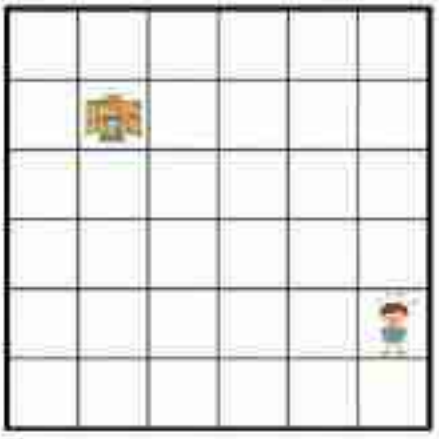
Line 3: _____

Line 4: _____

3.

Code

loop 2 times
  go up 1
  go left 1
go right 2
go up 1
enter library



YES NO

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____

Activity: Robot Teacher

Objective | What are we learning about?

Students will create a sequence of commands to guide a "robot" (the teacher) to a specific spot in the classroom, learning how to write and execute sequential events, and then alter the sequence to observe how changes affect the outcome.

Materials | What you will need for the activity.

- W... ...with ... to write a sequence of com...nds (o... ...ent)
- Open clas... ...or ... ...cher to move around
- A designated "ta... spo... ...m (e.g., a chair, a marked spo... ...or)

Instructions | How you will compl... ...activ...

1. Tell students they'll be "coders" and the te... ...ill be ... following their commands exactly.
2. Show the class the target spot (e.g., a chair) whe... ...nee... ...o.
3. Give each student a worksheet (or put students in pairs) ... writ... commands (e.g., "step forward 2, turn right, step forward 1") u... ...ike "step forward [number]," "turn right," or "turn left." Students sh...ld ... ...ast 1 loop in their code.
4. Have one student read their sequence aloud while the teacher follows the commands, moving through the classroom.
5. Check if the robot reaches the target spot and discuss what went wrong if it doesn't.
6. Ask the student to change one command (e.g., "turn right" to "turn left"), write the new sequence, and have the teacher follow it.
7. Discuss how the change affected the robot's path and if it reached the target spot.
8. Repeat with 1-2 more students, testing and altering their sequences.
9. Wrap up by explaining how the order of steps and changes affect outcomes, linking it to coding.

Name: _____ 195

Curriculum Connection
G2.2

Robot Teacher – My Code

Instructions	Think about where your teacher is and where the target spot is. Write a code that will program them to move to the target spot. **(Ex. Step forwards/backwards 2, turn right/left).**

My Program – Coding Instructions

Name: _____ 196

Curriculum Connection
CS 2

Robot Teacher – Coding Map

Instructions	Once your code is written, draw a map of your classroom. 1) Draw a stick figure for the teacher. 2) Draw the target spot using an X. 3) Draw arrows to show where the teacher moves using your code.

Name: _____ 197 Curriculum Connection CS 2

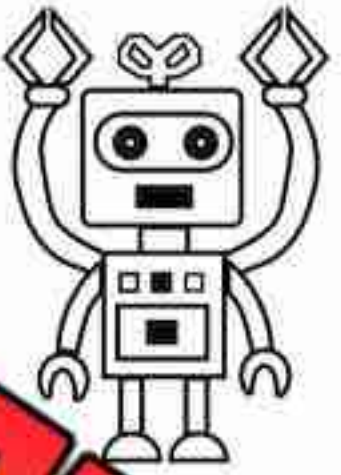
Activity: Human Robot - Concurrent Events

Objective What are we learning about?

Students will create and follow sequential and concurrent movement instructions by taking steps in an open space, demonstrating computational representations. They will write instructions like "Move 5 steps forward, then turn 90 degrees" and execute c…urrent actions like "Move 3 steps forward while clapping." By the end, they'll co…ese actions to writing and executing code in a mathematical context.

Materia… …will need for the activity.

- Instruction car… re… …k)
- Pencils
- Example card: "Move 5 …rw… …n 90 degrees



Instructions How you will complete the …

1. Explain that students will act as robots follow… …tion… …a computer follows code, taking steps in an open space (5 min).
2. Demonstrate by following a pre-made card: "Move 2 steps …w… …n turn 90 degrees," then "Move 3 steps forward while clapping" (5 min).
3. Divide into groups of 2-4; each group writes two cards: one sequential (e.g., "Move 4 steps forward, then turn 90 degrees") and one concurrent (e.g., "Move 2 steps forward while jumping") (10 min).
4. Groups take turns: one student as the "robot" follows their group's cards, staying in the open space, while others ensure they don't bump into anyone (15 min).
5. Discuss what they learned about clear instructions, the difference between sequential and concurrent actions, and how this relates to coding (5 min).

Name: _____ 198

Curriculum Connection
CE2

Examples Read the example coding instructions below

Instruction Type	Instruction Text
Sequential	1) Move 4 steps forward 2) Turn 90 degrees.

Instruction Type	Instruction Text
Sequential	1) Move 3 steps forward 2) Turn 180 degrees 3) Clap hands 4) Move 2 steps backwards 5) Stop

Ideas Below are ideas for commands you could use

Marching	Nodding head	Jumping
Stomping feet	Clapping	Hopping
Snapping fingers	Spinning	Tapping head
Waving	Jumping	Tiptoeing
Shaking hands	Blinking eyes	Patting knees
Swaying side to side	Whistling	Pointing
Twirling arms	Laughing	Shrugging shoulders

Name: _____ 199

Curriculum Connection
CE2

Template | Cut out the card below for students to write their code on

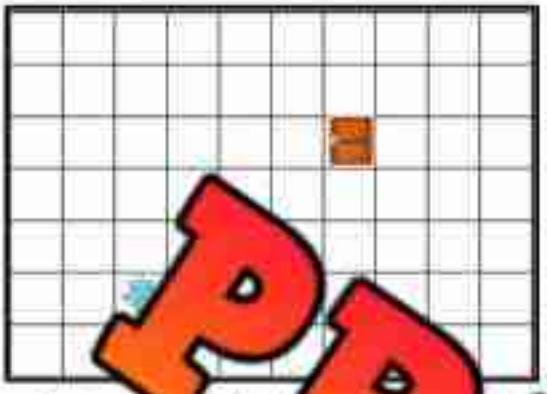
My Program – Coding Instructions

Instruction Type	Sequential	Concurrent
Action		
Act		
Action ____		
Action ____		
Action ____		
Action ____		
Action ____		
Action ____		
Action ____		
Action ____		

Name: _____ 200

Coding Quiz

Part 1 — Write the code below



Robot moved _____ squares

1. Write the code that gets the robot to the door

Line 1: _____

Line 2: _____

Line 3: _____

2. Write the code that gets the robot to the store and then home.

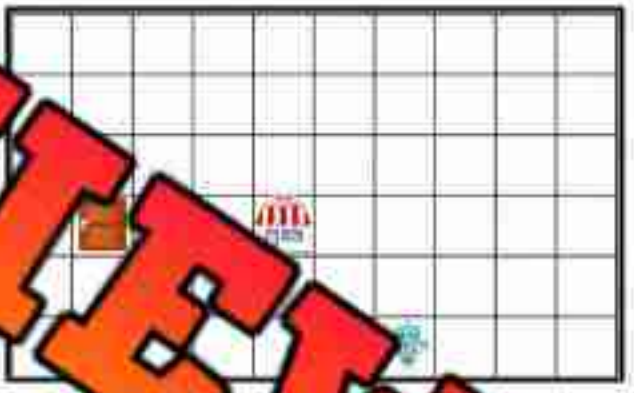
Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____



Robot moved _____ squares

Part 2 — Read the code and create the program

3.

Code

go down 2
go right 1
go down 2
go right 5
open door

Robot moved _____ squares

Part 3 Put the scrambled code in the correct order by labelling the steps 1-6

4. Go to school and then home

Code

_____ - go up 2

_____ - go down 5

_____ - go right 1

_____ - enter school

_____ - ft 2

_____ -

Part 4 Wi... ork... le yes or no. Re-write any code that won't work

5. Use a loop to send ... ner... ... k 5 times. (Don't forget to cross the finish line!)

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____

Line 7: _____

Part 5 Write the message that the code has programmed

6.

Code

Code1 = "DE"

Code2 = "TO"

Code3 = "I"

Code4= "CO"

print ("I love", Code2, Code4,Code1,Code3)

The Computer Program:

_____ _____ _____

_____ _____ _____

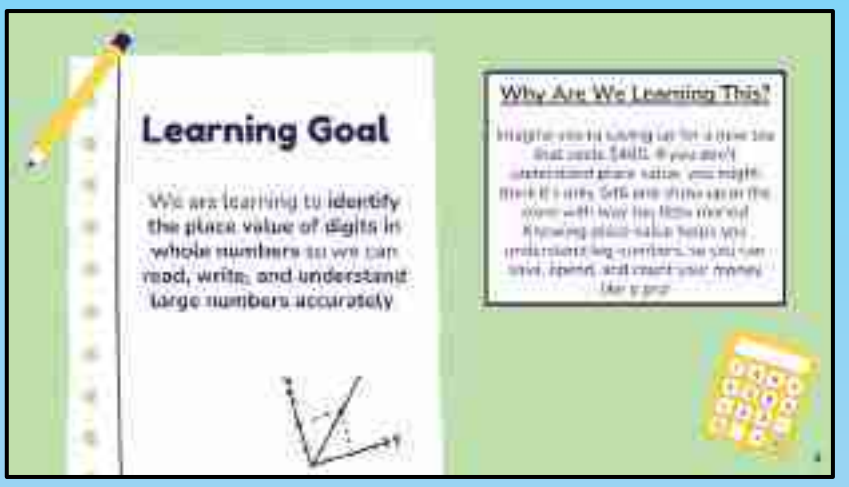
Google Slides Lessons Preview

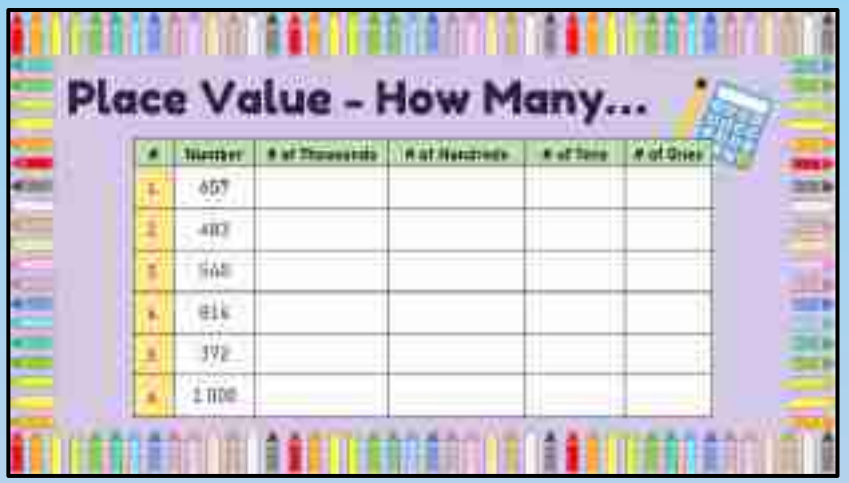
Ontario Math Number Unit – Grade 3

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Why Math Is Important
- And More!



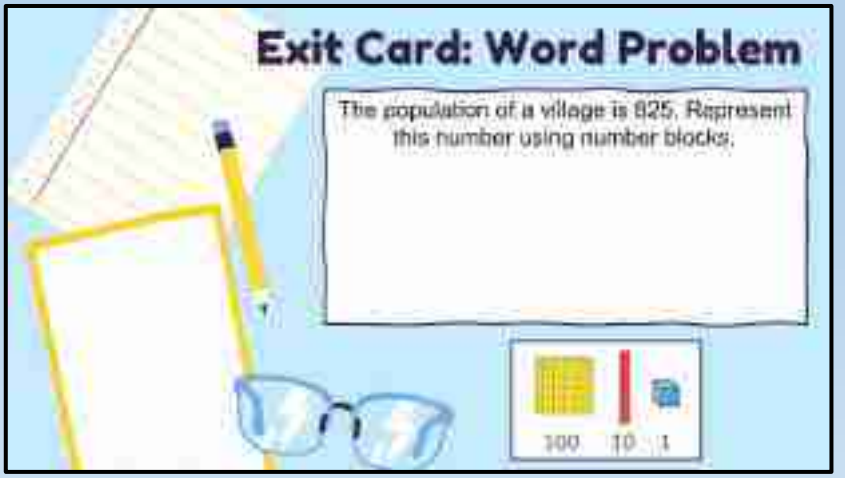


Part 2 – Action!

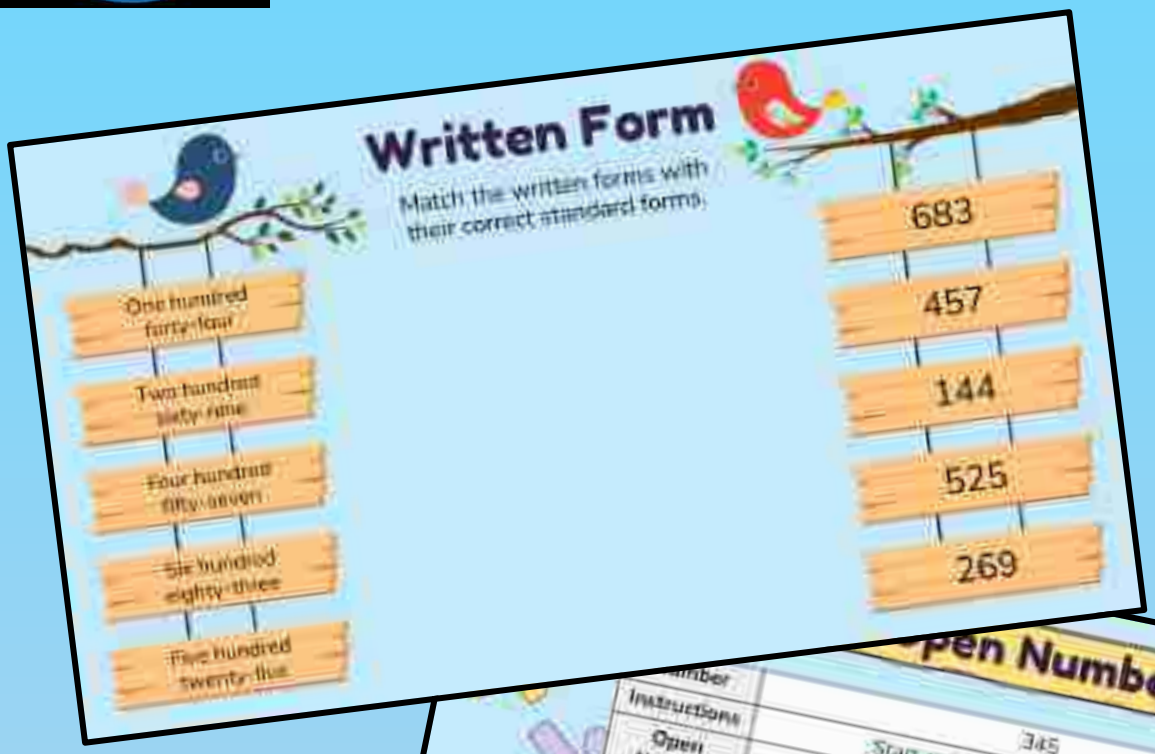
- Questions
- Matching
- Drag and Drop
- Videos
- And More!

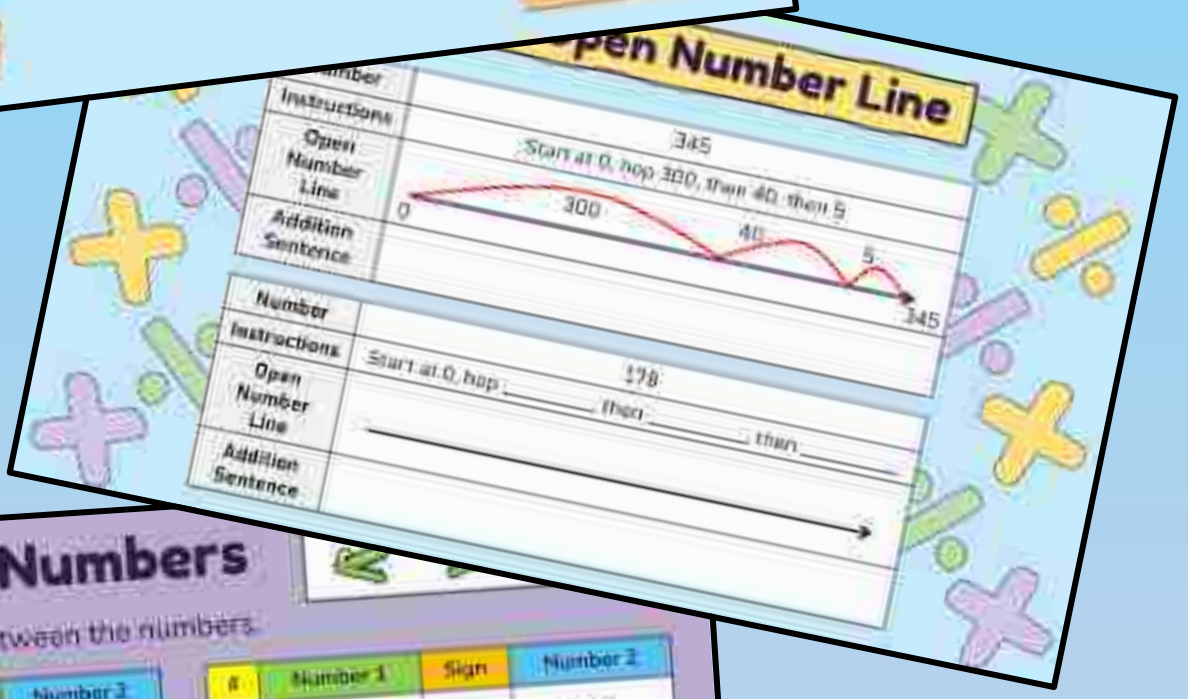
Part 3 – Consolidation!

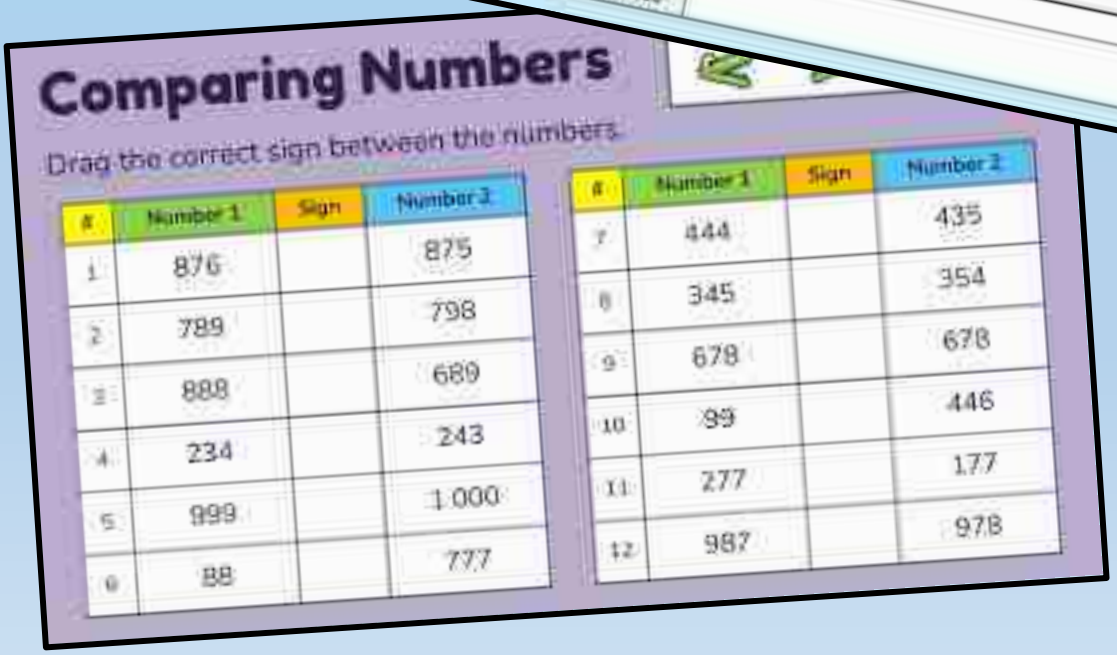
- Exit Cards
- Word Problems
- Quizzes
- Student Created Quizzes



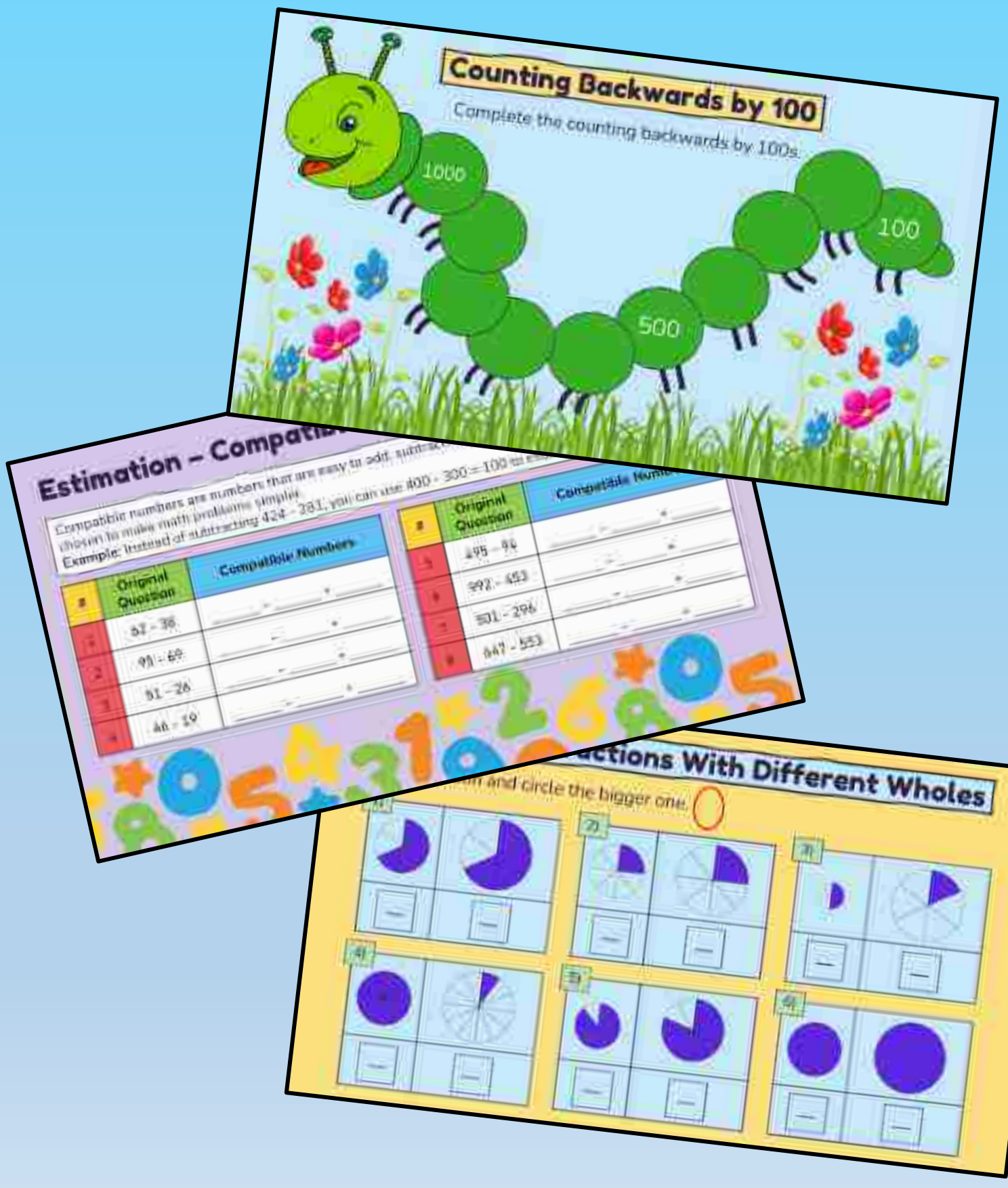
Ontario Math Number Unit – Grade 3







Ontario Math Number Unit – Grade 3



Workbook Preview

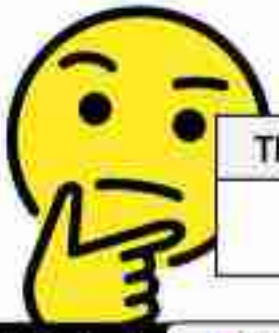
Grade 3
Strand: B1 – Number Sense

	Curriculum Expectations	Pages That Cover the Expectations
B1.1	read, represent, compose, and decompose whole numbers up to and including 1000, using a variety of tools and strategies, and describe various ways they are used in everyday life	10 – 18, 21 – 22
B1.2	compare and order whole numbers up to and including 1000, in various contexts	25 – 29
B1		
B1		
B1.5	use place value when describing and representing multi-digit numbers in a variety of ways, including with base ten materials	5 – 9, 19 – 22
B1.6	use drawings to represent, solve, and compare the results of fair-share problems that involve sharing up to 20 items among 2, 3, 4, 5, 6, 8, and 10 sharers, including problems that result in whole numbers, mixed numbers, and fractional amounts	48 – 68
B1.7	represent and solve fair-share problems that focus on determining and using equivalent fractions, including problems that involve halves, fourths, and eighths; thirds and sixths; and fifths and tenths	69 – 70

Name: _____ 5

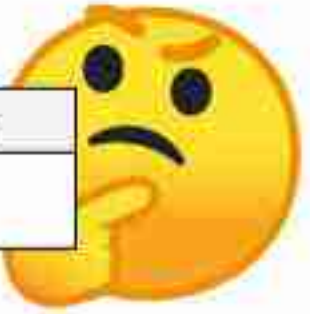
Curriculum Connection
B1.5

Place Value Chart



3937

Thousands	Hundreds	Tens	Ones
3	9	3	7



Part 1 Fill in the Place Value Charts below

87

Thous		ns	Ones

2) 2 142

Thousands	Hundreds	Tens	Ones

3) 6 8

Thousands	Hundreds		Ones

4) 7 483

sands	Hundreds	Tens	Ones

5) 3 659

Thousands	Hundreds	Tens	Ones

684

		ns	Ones

Part 2 Which place value is the underlined numbe

1) 3575 Tens	2) 5184	3) 2138
4) 8321	5) 2839	6) 9562
7) 2962	8) 5354	9) 9303

Name: _____ 6

Curriculum Connection
B1.5

Place Value - How Many...

Number	# of Thousands	# of Hundreds	# of Tens	# of Ones
4248	4	2	4	8

Part 1 Fill in the table below

	Number	# of Thousands	# of Hundreds	# of Tens	# of Ones
1.					
2.	2364				
3.	2				
4.	8937				
5.	3489				
6.	4218				
7.	7452				
8.	7217				
9.	9679				
10.	6631				

Part 2 Answer the riddles below

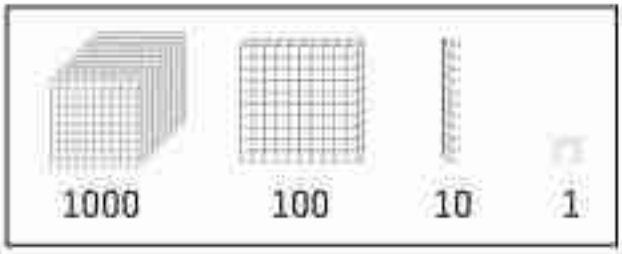
1) My number has 4 tens, 3 less ones than tens. What is my number?

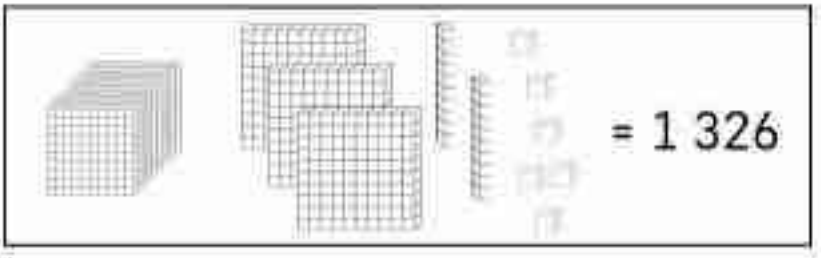
2) My number has 7 hundreds, 8 ones and half as many tens as ones. What is my number?

Name: _____ 7

Curriculum Connection
B1.5

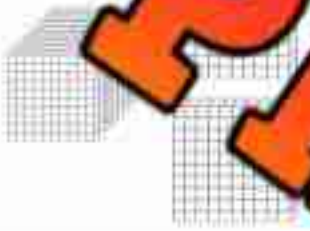
Base Ten Blocks



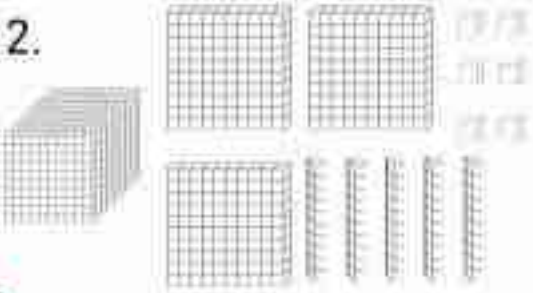


Part 1 How many blocks do you count?

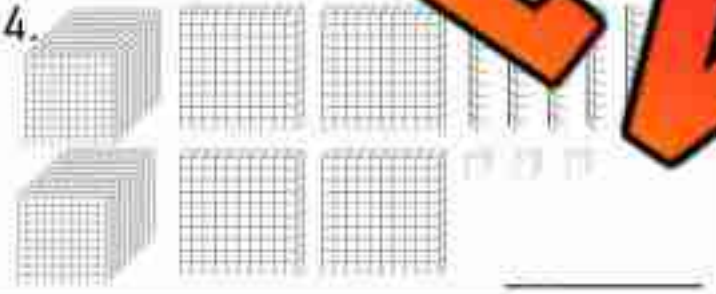
1.

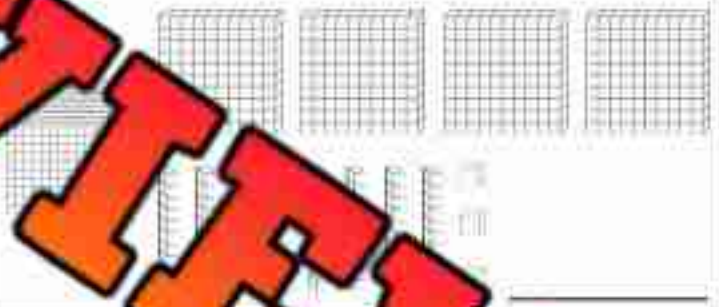


2.



4.





Part 2 Draw the base ten blocks to represent the

1) 2375

2) 1184

3) 4542

4) 4263

Name: _____ 8

Curriculum Connection
B1.5

Skip Counting - Base Ten Blocks

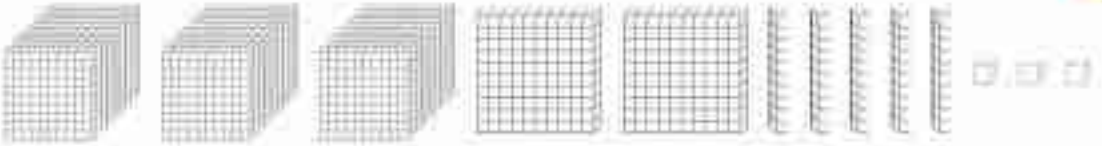
Questions	How many blocks do you count?

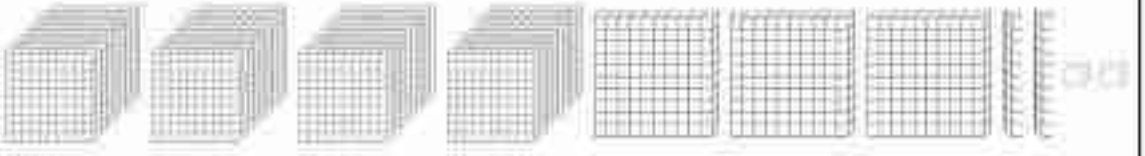
1) 

2) 

3) 

4) 

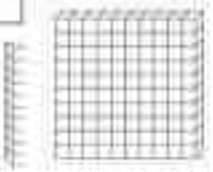
5) 

6) 

Name: _____ 9

Curriculum Connection
B1.5

Base Ten Block - Challenge



Challenge | Solve the problem

Sam and Dan are arguing over who has more blocks. Sam has 3 thousands blocks, 5 hundreds blocks, 5 tens blocks, and 2 ones blocks. Dan has 2 thousands blocks, 14 hundreds blocks, 3 ten blocks, and 6 one blocks.

Dan thinks [illegible] because he has more blocks, his total blocks are more than Sam's.

Who ha[illegible] Show your work below.

Sam's Blocks: _____ Dan's Blocks: _____

Who has more blocks? _____

Bonus:
How many more blocks will Sam/Dan need to have the same number of blocks? Draw the blocks below.

Answer: _____

Name: _____ 10

Curriculum Connection
B1.1

Expanded Form

2 372 ← Standard Form

2000 + 300 + 70 + 2 ← Expanded Form

Part 1 What is the standard form of the numbers below?

1) 4000 + 300 + 10 + 4	2) 2000 + 700 + 90 + 6	3) 1000 + 500 + 20 + 9
4) 8000 + 0 + 0 + 5	5) 7000 + 200 + 40 + 5	6) 6000 + 400 + 30 + 6
7) 8000 + 0 + 0 +	8) 3000 + 70 + 0	9) 3000 + 500 + 70 + 2

Part 2 What is the expanded form of the numbers below?

1) 5445	2) 1224
3) 8064	4) 7309
5) 9286	6) 3246

Part 3 Fill in the blanks with the missing number

1) 4523 = 4000 + _____ + 20 + 3

2) 3029 = _____ + 0 + 20 + 9

3) 5163 = 5000 + 100 + 60 + _____

4) 2460 = _____ + 400 + _____ + 0

Name: _____ 11

Curriculum Connection
B1.1

Written Form

1 – One	5 – Five	9 – Nine	13 – Thirteen	17 – Seventeen	30 – Thirty	70 – Seventy
2 – Two	6 – Six	10 – Ten	14 – Fourteen	18 – Eighteen	40 – Forty	80 – Eighty
3 – Three	7 – Seven	11 – Eleven	15 – Fifteen	19 – Nineteen	50 – Fifty	90 – Ninety
4 – Four	8 – Eight	12 – Twelve	16 – Sixteen	20 – Twenty	60 – Sixty	100 – Hundred
						1000 – Thousand

Part 1 Write the standard form of the written words below

1) Two tho[illegible]hree hundred thirty-six	2) Four thousand two hundred sixty-three
3) Seven[illegible]usand[illegible]d fifteen	4) Six thousand twenty-eight
5) Three thousand four hu[illegible]-nine	[illegible]ne thousand one hundred thirty-three

Part 2 Write the written form of th[illegible]ers

1) 1234

2) 3362

3) 6431

4) 9523

5) 2206

Name: _____ 12

Curriculum Connection
B1.1

Zero As Placeholder

1 – One	5 – Five	9 - Nine	13 – Thirteen	17 – Seventeen	30 – Thirty	70 – Seventy
2 – Two	6 - Six	10 – Ten	14 – Fourteen	18 - Eighteen	40 – Forty	80 – Eighty
3 - Three	7 – Seven	11 – Eleven	15 - Fifteen	19 - Nineteen	50 – Fifty	90 – Ninety
4 – Four	8 – Eight	12 - Twelve	16 – Sixteen	20 - Twenty	60 - Sixty	100 - Hundred

Part 1 Write the standard form of the written words below

1) Three hu[illegible]five	2) Six hundred, two
3) One hu[illegible]red, ni[illegible]	4) Two hundred, twenty
5) Eight hundred, seven	[illegible]ine hundred, eight

Part 2 Write the written form of th[illegible]ber[illegible]

1) 706

2) 301

3) 405

4) 830

5) 904

Name: _____ 13

Curriculum Connection
B1.1

Zero As Placeholder

1 – One	5 – Five	9 - Nine	13 – Thirteen	17 – Seventeen	30 – Thirty	70 – Seventy
2 – Two	6 - Six	10 – Ten	14 – Fourteen	18 - Eighteen	40 – Forty	80 – Eighty
3 - Three	7 – Seven	11 – Eleven	15 - Fifteen	19 - Nineteen	50 – Fifty	90 – Ninety
4 – Four	8 – Eight	12 - Twelve	16 – Sixteen	20 - Twenty	60 - Sixty	100 - Hundred

Part 1 Grayson finished his homework! Find his errors and correct them

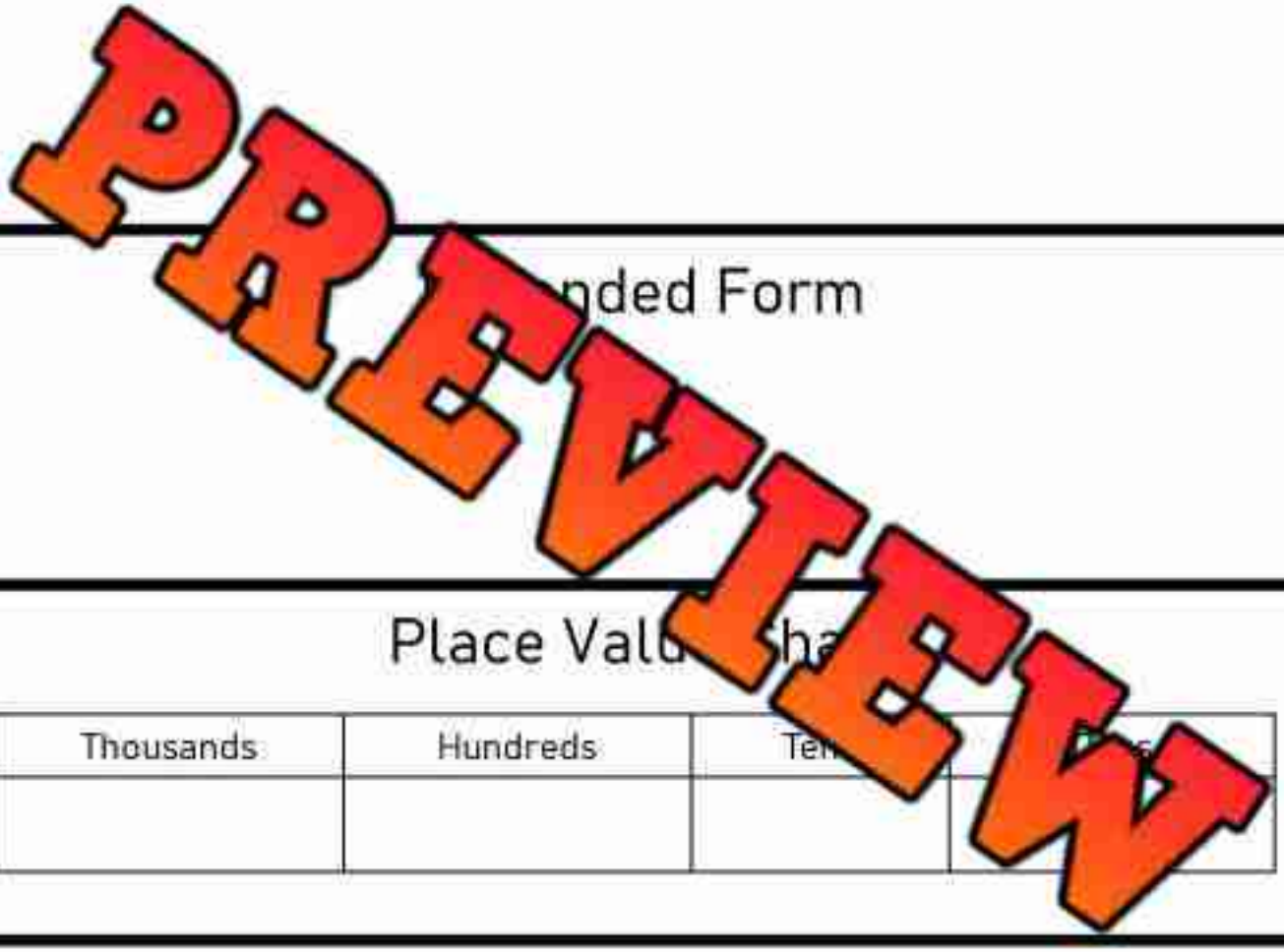
Question	Grayson's Answer	Correct Answer
1) Se[illegible]	72	
2) Eight hund[illegible]	822	
3) Five hundred, [illegible]	[illegible]4	
4) Nine hundred, eight	[illegible]	
5) Two hundred, one	[illegible]1	
6) Six hundred, seven	67	
7) One hundred, one	111	
8) Three hundred, five	350	

Part 2 What is wrong with Grayson's answer below? Explain.

Question	Grayson's Answer	Why is Grayson's answer wrong?
Four hundred, four	44	_____ _____ _____ _____

Standard Form

Words



nded Form

Place Valu ha

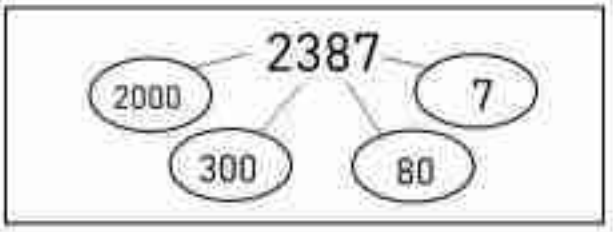
Thousands	Hundreds	Ten	

Pictures

Name: _____ 16

Curriculum Connection
B1.1

Decomposing Numbers



Questions Decompose the numbers below

1) 847

2) 3583

3) 49

4) 2186

5) 7452

6)

7) 8479

8) 6134

9) 9052

10) 3255

Name: _____ 17

Curriculum Connection
B1.1

Composing Numbers

3000 500 70 5

3575

Questions | Compose the numbers below

1) 500 [illegible] 80 6

2) 1000 100 30 3

3) 3000 200 [illegible]

4) 7000 500 30 8

5) 2000 400 60 9

6) [illegible] 9

7) 3000 500 70 4

8) 4000 200 [illegible] 1

9) 6000 200 40 6

10) 8000 900 40 2

Name: _____ 18

Curriculum Connection
B1.3

Skip Counting - Money - Base Ten

Questions | Count the money below

1) 

$_____

2) 

$_____

3) 

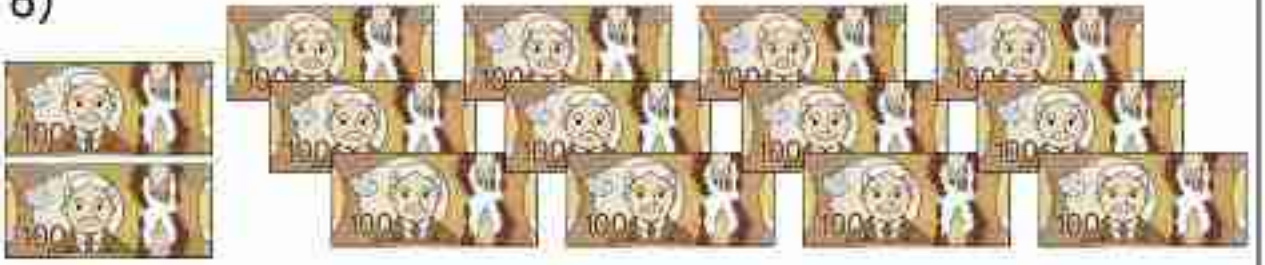
$_____

4) 

$_____

5) 

$_____

6) 

$_____

Name: _____ 20

Curriculum Connection
B1.9

Place Value Riddles

Questions Solve the riddles below

1) Which number has: 6 thousands, 3 hundreds, 3 less tens than hundreds, and 5 more ones than tens?

_____ _____ _____ _____
th hun tens ones

2) Wh num 3 ones, 4 hundreds, half as many thousands as hundred ce ny tens as hundreds?

3) Which number has 6 thousands, as dreds as thousands, 8 tens and half as many one s.

4) Which number has 9 thousands, 5 tens, four less hundreds than thousands and two less ones than hundreds.

Name: _____ 21

Curriculum Connection
B1.1, B1.5

Place Value - Number Breakdown

Questions | Fill in the blanks below

Number Breakdown

8782

Th		T	O

Write the value of the underlined digit

1) 8 7̲82 = _____

2) 8 78̲2 = _____

3) 8 782̲ = _____

4) 8̲ 782 = _____

Fill in the bla[illegible]nting[illegible]xpanded form below

_____ + _____

Fill in the pattern below

8 782 , _____ , 8 784 , _____ , _____ , 8 787 ,

Fill in the pattern below

8 782 , 8 792 , 8 802 , _____ , _____ ,

Fill in the pattern below

8 782 , 8 882 , _____ , 9 082 , _____ , _____ ,

Compare using <, >, or =

8 782	8 795
5 315	8 782
8 782	3 346
8 325	8 782
8 237	8 782

8 782	+10	
8 782	+100	
8 782	+1000	
8 782	- 1000	
8 782	- 100	

Name: ____________________ 23

Place Value Quiz

Part 1 Fill in the Place Value Charts below

1) 2236

Thou	Hun	Tens	Ones

2) 4363

Thou	Hun	Tens	Ones

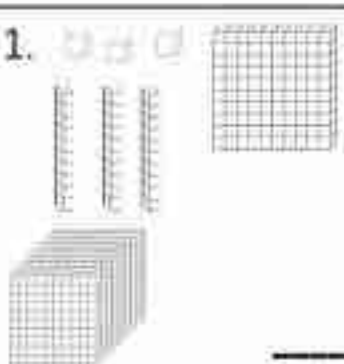
3) 4 392

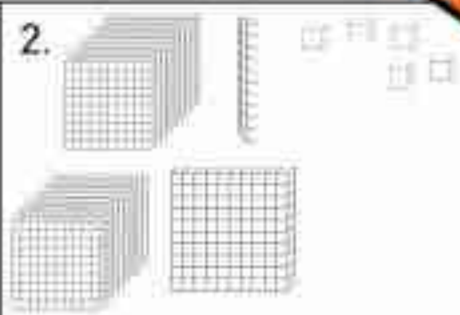
Thou	Hun	Tens	Ones

Part 2 What place value is the underlined number?

1) 1355	2) ...38	3) 4135
4) 5331	5) ...86	6) 9734

Part 3 How many blocks do you count?

1.  ________

2.  ________

3.  ________

Part 4 What is the standard form of the numbers below?

1) 2000 + 200 + 20 + 1	2) 5000 + 300 + 60 + 8	3) 9000 + 200 + 4

Part 5 What is the expanded form of the numbers below?

1) 3775	2) 2593
3) 5421	4) 6309

Part 6 tandard form of the written words below

1) Three usand ed thirty-six	2) Four thousand one hundred four

Part 7 Write the orm bers below

1) 3234
2) 5617

Part 8 Solve the riddles

1) Which number has: 4 thousands, 5 hundreds, 3 less tens than hundreds, and 7 more ones than tens?

2) Which number has 6 ones, 2 hundreds, half as many thousands as hundreds and twice as many tens as hundreds?

Name: _____ 25

Curriculum Connection
01.2

Comparing Numbers

Part 1 Write a number between 1 and 100 that fits the description

1) Number greater than 42	2) Number less than 67
3) Numb ss than 29	4) Number equal to 84
5) N r grea 77	6) Number less than 12
7) Number equa 7	8) Number greater than 95

Part 2 Write a number betw 1 and would make sense

1) 205 > _____	2) 624 > _____	421
4) 865 = _____	5) _____ < 327	6) 210 > _____
7) _____ > 895	8) 937 < _____	9) _____ = 902
10) 815 = _____	11) _____ < 357	12) 220 > _____

Name: _____ 26

Curriculum Connection
01.2

Comparing Numbers

276  312	576  218	176  176

Part 1 Compare the following numbers using < > or =

1) 65 ☐	2) 36 ☐ 36	3) 135 ☐ 93
4) 213 ☐ 9	☐ 393	6) 565 ☐ 293
7) 634 ☐ 643	605 ☐	9) 765 ☐ 753

Part 2 Greater than, Equal to, Less th

1) 75 is ___ 42 Greater than	2) 156 is ___ 322 _____	3) 5 25 _____
4) 484 is ___ 412 _____	5) 372 is ___ 136 _____	6) 271 is ___ 242 _____
7) 725 is ___ 742 _____	8) 454 is ___ 445 _____	9) 345 is ___ 345 _____

Name: _____ 29

Curriculum Connection
01.2

Comparing Numbers

25, 53, 42, 65, 22 Least to Greatest 22, 25, 42, 53, 65		25, 53, 42, 65, 22 Greatest to Least 65, 53, 42, 25, 22

Part 1 Order the numbers below from least to greatest

6, 31, 41, 46 _____, _____, _____, _____, _____	18, 9, 25, 53, 22 _____, _____, _____, _____, _____
65, [illegible] 3, 75 _____, _____, _____, _____, _____	158, 131, 143, 148, 131 _____, _____, _____, _____, _____
221, 326, 255, 428, 203 _____, _____, _____, _____, _____	575, 233, 356, 657 _____, _____, _____, _____

Part 2 Order the numbers below from g[illegible] le

11, 6, 3, 17, 15 _____, _____, _____, _____, _____	40, 43[illegible] _____, _____, _____, _____, _____
85, 99, 93, 85, 91 _____, _____, _____, _____, _____	123, 120, 123, 174, 177 _____, _____, _____, _____, _____
267, 423, 128, 231, 254 _____, _____, _____, _____, _____	765, 353, 278, 358, 735 _____, _____, _____, _____, _____

Name: ______________________ 30

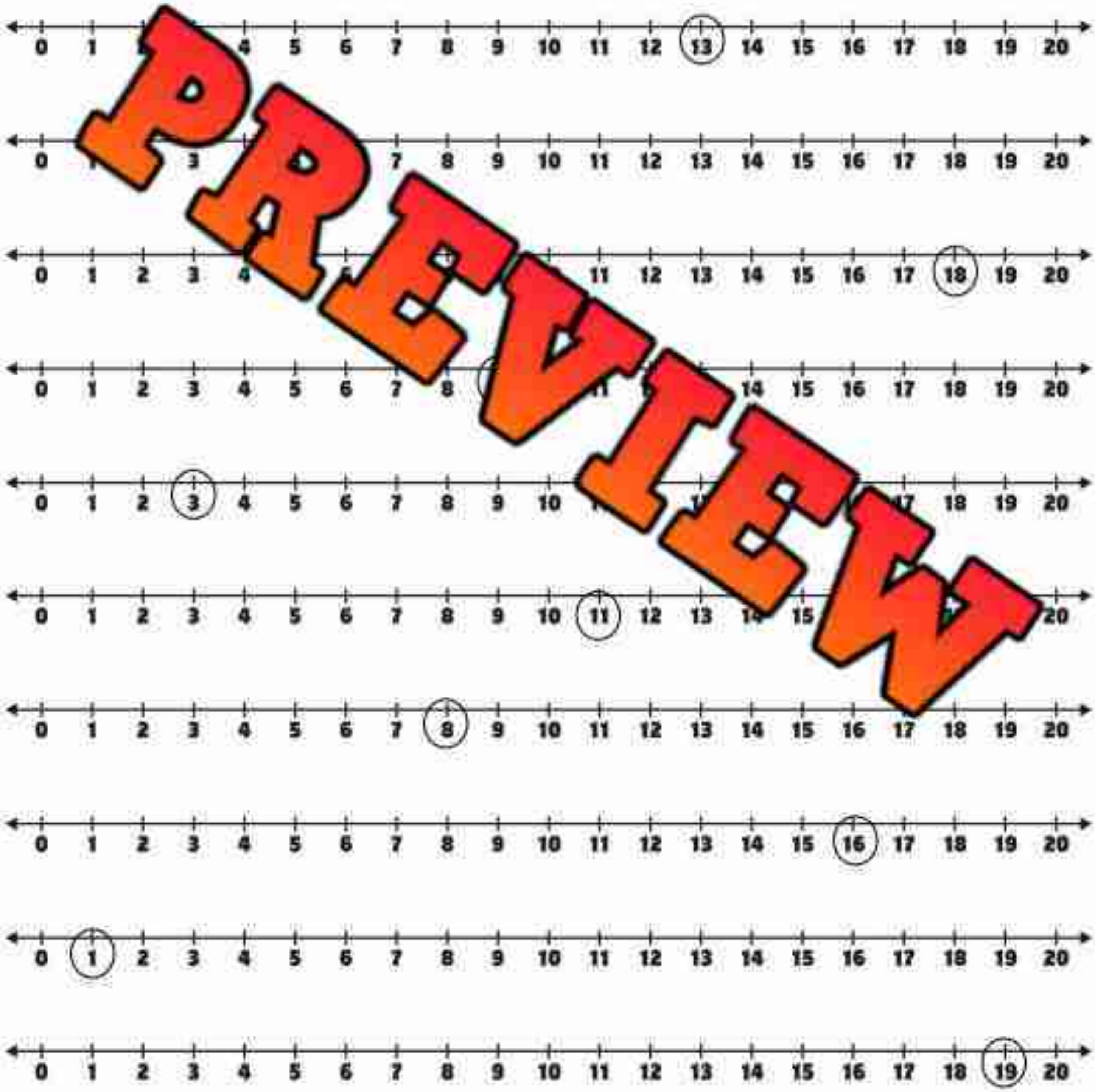
Curriculum Connection
D13

Rounding Numbers to the Nearest 10 - Number Line

Round Down ← → Round Up

0	1	2	3	4	5	6	7	8	9

Questions Round the number to the nearest ten (circle the new number)



Name: _____ 31

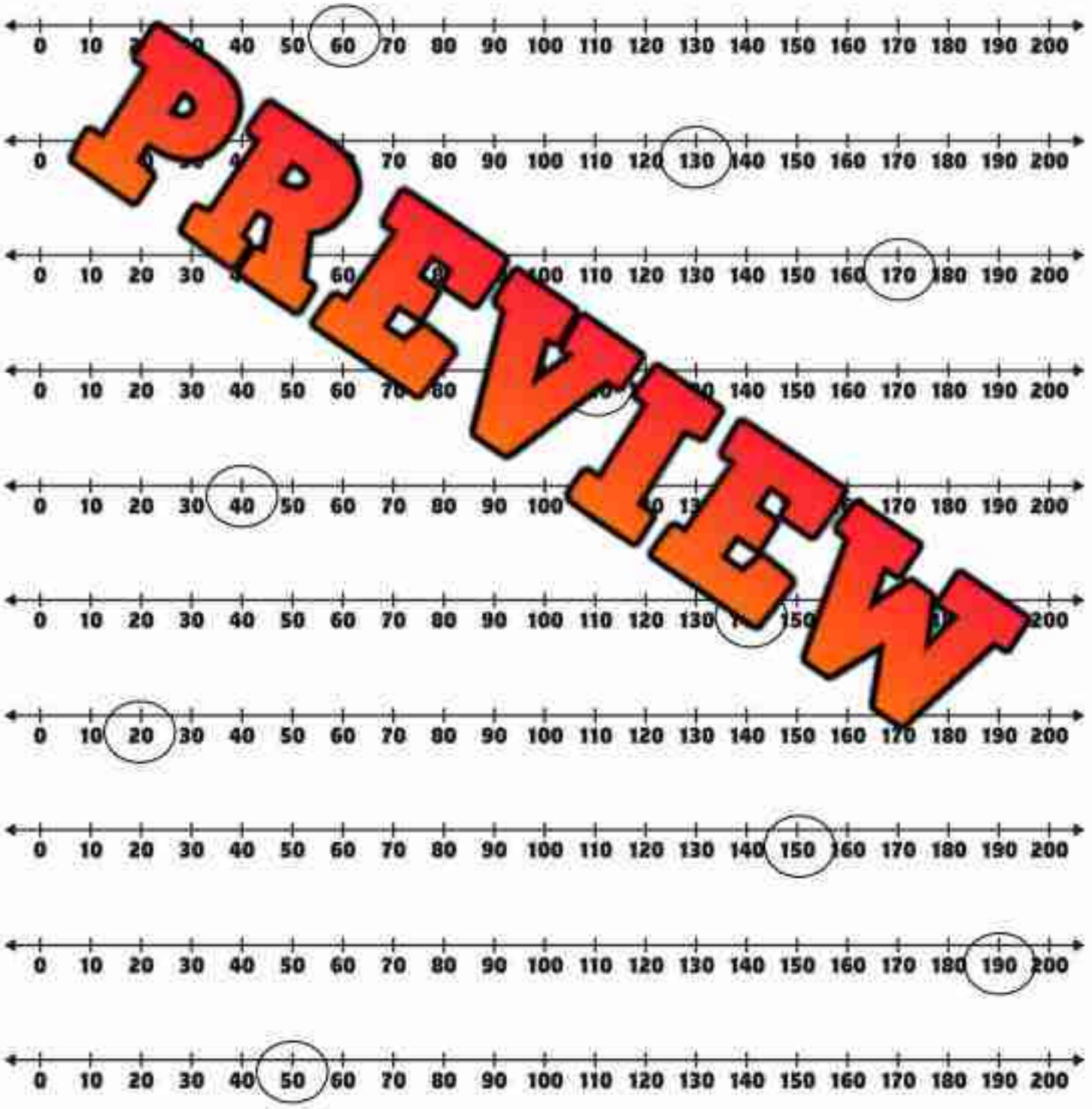
Curriculum Connection
013

Rounding Numbers to the Nearest 100 - Number Line

Round Down ← | → Round Up

0	1	2	3	4	5	6	7	8	9

Questions Round the number to the nearest hundred (circle the new number)



Name: _____ 33

Curriculum Connection
013

Rounding Numbers to the Nearest 10 and 100

Round Down ← → Round Up

0	1	2	3	4	5	6	7	8	9

Rounding to the nearest 10
42 → 40
155 → 160

Rounding to the nearest 100
242 → 200
389 → 400

Part 1

Round the numbers to the nearest 10

1) 27 → _____	2) 53 → _____	3) 48 → _____
4) 75 → _____	5) 51 → _____	6) 44 → _____
7) 157 → _____	8) 18 → _____	9) 278 → _____
10) 623 → _____	11) 231 → _____	12) → _____

Part 2

Round the numbers to the nearest 100

1) 172 → _____	2) 235 → _____	3) 477 → _____
4) 217 → _____	5) 243 → _____	6) 587 → _____
7) 850 → _____	8) 912 → _____	9) 397 → _____
10) 363 → _____	11) 422 → _____	12) 550 → _____

Name: _____ 34

Curriculum Connection
013

Rounding Numbers to the Nearest 1000

Round Down ← → Round Up

0	1	2	3	4	5	6	7	8	9

Rounding to the nearest 1000
↓ 4②1 2 → 4000
↑ 1⑤7 5 → 2000

Part 1 numbers to the nearest 1000

1) 2227 → _____	23 → _____	3) 4638 → _____
4) 7155 → _____	46 → _____	6) 4744 → _____
7) 1357 → _____	8) 1834 → _____	2768 → _____
10) 6213 → _____	11) 2313 → _____	12) → _____
13) 6162 → _____	11) 3591 → _____	12) 46 → _____
16) 2243 → _____	17) 9371 → _____	18) 2597 → _____

Part 2 Solve the word problems below

1) Lebron James scored 1698 points during the 2019-2020 season. Round his points to the nearest thousand.

2) The school raised $4328 in donations last year. Round the money to the nearest thousand.

Name: _____ 37

Curriculum Connection
D1.4

Counting Within 1000, By 1s

Questions

Count forwards by 1s

461				
459		465		
				468
		47		
	479			476

Name: _____ 38

Curriculum Connection
D1.4

Counting Within 1000, By 1s

Part 1 Count forwards by 1s within 1000

1)	15	16			19			22		
2)	1			185				189		
3)	8	3			342		344			
4)	791		79			796			799	
5)	925	926							933	

Part 1 Count backwards by 1s wit 00

1)	15	14			11					
2)	225		223			220			217	
3)	362	361			358			355		
4)	605			602		600		598		
5)	938				934			931	930	

Name: _____ 41

Curriculum Connection
01.4

Counting by 100

Part 1 Count by 100 to 1000

Part 2 Fill in the blanks counting by 100

1) 100, 200, 300, _____, _____, _____, _____, _____, _____, _____

2) 100, _____, _____, 400, _____, _____, _____, _____, _____, _____

3) _____, 200, _____, _____, _____, 600, _____, _____, _____, _____

4) _____, _____, _____, _____, _____, _____, _____, _____, _____, _____

Name: _____ 43

Curriculum Connection
D1.4

Counting by 200s

Part 1

Count by 200's

		1800	2000			
20				2600		3800
600					3200	

Part 2 Fill in the Blanks counting by 200

1) 200, 400, 600, _____, _____, _____, _____

2) 200, _____, _____, 800, _____, _____, _____

3) _____, 400, _____, _____, 1000, _____, _____

4) _____, _____, _____, _____, _____, _____

Name: _____ 45

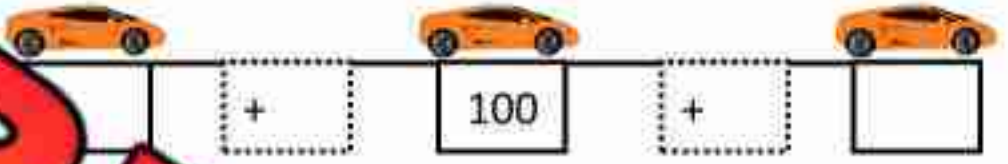
Curriculum Connection
01.4

Counting - Bridging Over 100

94 + 8

Questions Fill in the blanks by bridging over 100

1) 97



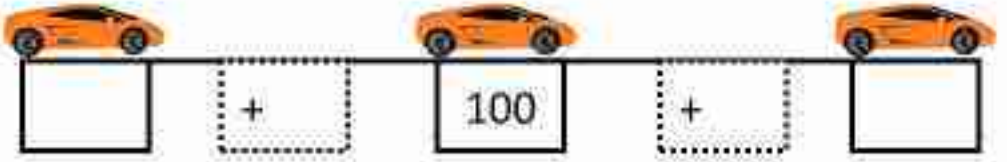
2) 93 + 9

3) 95 + 8

4) 99 + 6

5) 94 + 9

6) 96 + 7



Name: _____ 48

Curriculum Connection
01.6

Partitioning Even Quantities

Questions Circle the objects to put them into two groups.
How many are in each group? Are there any left over?

Objects	Questions	
	How many objects are there?	
	How many are in each group?	
	Are there any left over?	

Objects	Questions	
	How many objects are there?	
	How many are in each group?	
	Are there any left over?	

Objects	Questions	
	How many objects are there?	
	How many are in each group?	
	Are there any left over?	

Objects	Questions	
	How many objects are there?	
	How many are in each group?	
	Are there any left over?	

Name: _____ 51

Curriculum Connection
01.6

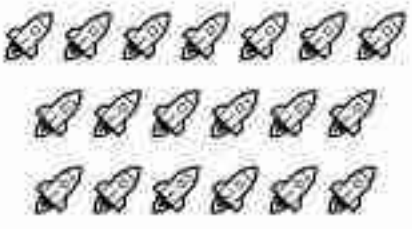
Partition Objects Into Multiple Groups

Questions Circle the objects to put them in groups. How many groups did you make? How many are in each group? Are there any left over?

Objects	Questions	
	How many groups did you make?	
	How many are in each group?	
	Are there any left over?	

Objects	Questions	
	How many groups did you make?	
	How many are in each group?	
	Are there any left over?	

Objects	Questions	
	How many groups did you make?	
	How many are in each group?	
	Are there any left over?	

Objects	Questions	
	How many groups did you make?	
	How many are in each group?	
	Are there any left over?	

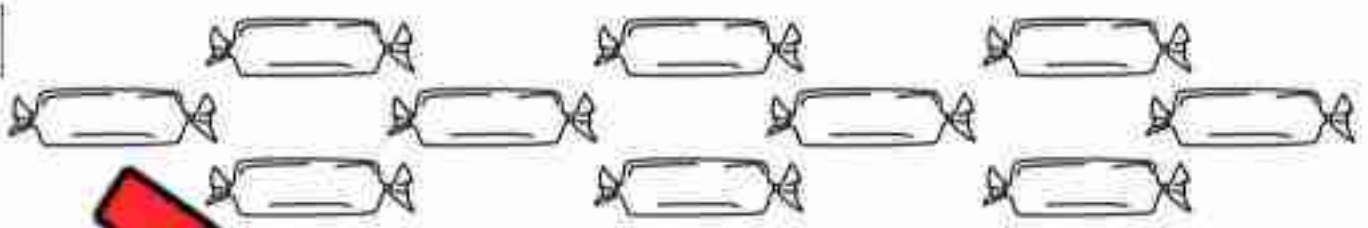
Name: _____ 52

Curriculum Connection
01.6

Sharing

Sharing | Answer the questions below

1)



a) How [illegible] are there?	
b) S[illegible] share the candies equally. How ma[illegible] ch get?	
c) Oh no, now [illegible] share the candies. If there are 5 friends total, how many [illegible] ent get?	

Sam	[illegible]	[illegible]	Jack	Nick

2)

a) How many cookies are there?	
b) Clara and Ivy baked the cookies. Now they want to share them equally. How many cookies will they each get?	
c) Julia just knocked on the door. Now she wants to share the cookies with Clara and Ivy. How many will they each get now?	

Clara	Ivy	Julia

Name: _____ 53

Curriculum Connection
01.6

Sharing - Remainders

Sharing Answer the questions below

a) How [illegible]kes are there?	

b) Lev[illegible]d Tom[illegible]e cupcakes. Now they need to share them equally. How many w[illegible]ne[illegible]?

	Tom

c) How many will be leftover (remaining/remainde[illegible]	

d) Dane has also asked to share the cupcakes. How many will e[illegible]t now?

Levi	Tom	Dane

e) How many will be leftover?	

Name: _____ 54

Curriculum Connection
01.6

Sharing - Remainders

Sharing Answer the questions below

2)

a) How many d[illegible] these?

b) Ryan and Jo[illegible] arne[illegible] ey above. If they split it equally, how many dollars will they e[illegible]

Ryan	Jordan

c) How many will be leftover (remaining/remainder)?

d) Ryan and Jordan have to split the money with Will as well. H[illegible]any dollars will they each get?

Ryan	Jordan	Will

e) How many dollars will be leftover (remaining/remainder)?

Name: _____ 55

Curriculum Connection
01.6

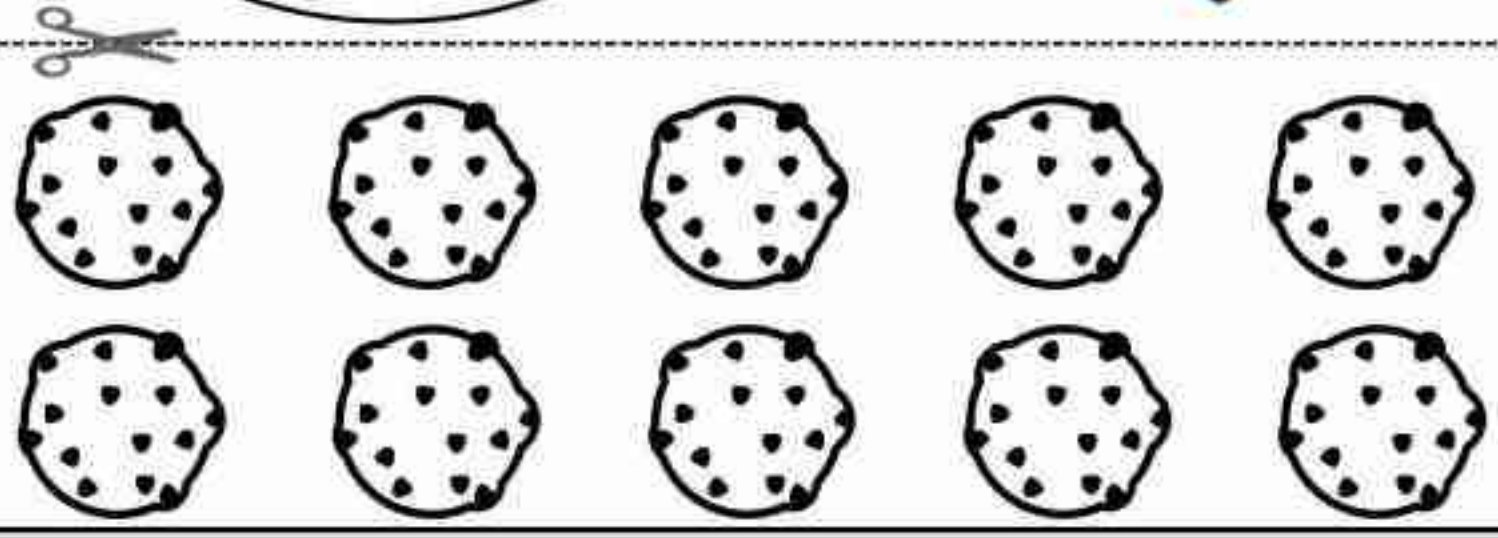
Fair Sharing - Cookies

Four friends are sharing the cookies below. Cut and paste the cookies on the plates. Make sure everyone gets the same amount of cookies!

Mark's Plate

Sam's Pl

_____
10



Name: _____ 57

Curriculum Connection
01.6

Fair Sharing - Pizza

Alex and Julia are really hungry tonight. They ordered 3 pizzas to share. Each pizza is cut up into 4 slices. How much pizza will Alex and Julia get?

Alex's Plate

Julia's Plate

_____ # of total pizzas

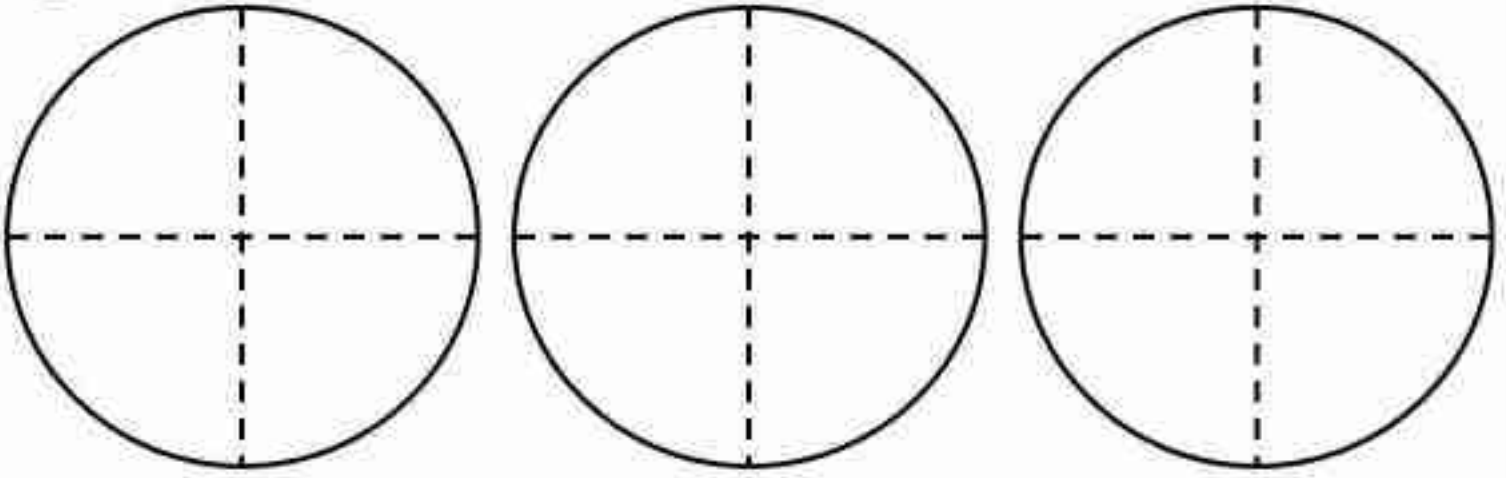
4 Slices in one pizza (whole)

Alex's Slices

_____ # of total pizzas

4 Slices in one pizza (whole)

Julia's Slices



Name: _____ 58

Curriculum Connection
01.6

Fair Sharing - Chocolate Bars

Sharing Share the chocolate bars below

Chocolate Bar

Chocolate Bar

1) a) Zach has 2 [illegible] bars that he wants to share with 10 people. How many pieces will each person get?

b) Ryan is one of the people that is getting some chocolate. What fraction the chocolate bar is Ryan getting?

2) a) Zach has two more chocolate bars that he will also share with 5 people. How many pieces will each person get?

b) Chris is one of the people that is getting some chocolate. What fraction of the chocolate bar is Chris getting?

3) a) Zach found two more chocolate bars that he will now share with 5 people in total. How many pieces of chocolate will each person get?

b) Sam is one of the people that is getting some chocolate. What fraction of the chocolate bar is Sam getting?

Name: _____ 59

Curriculum Connection
D1.6

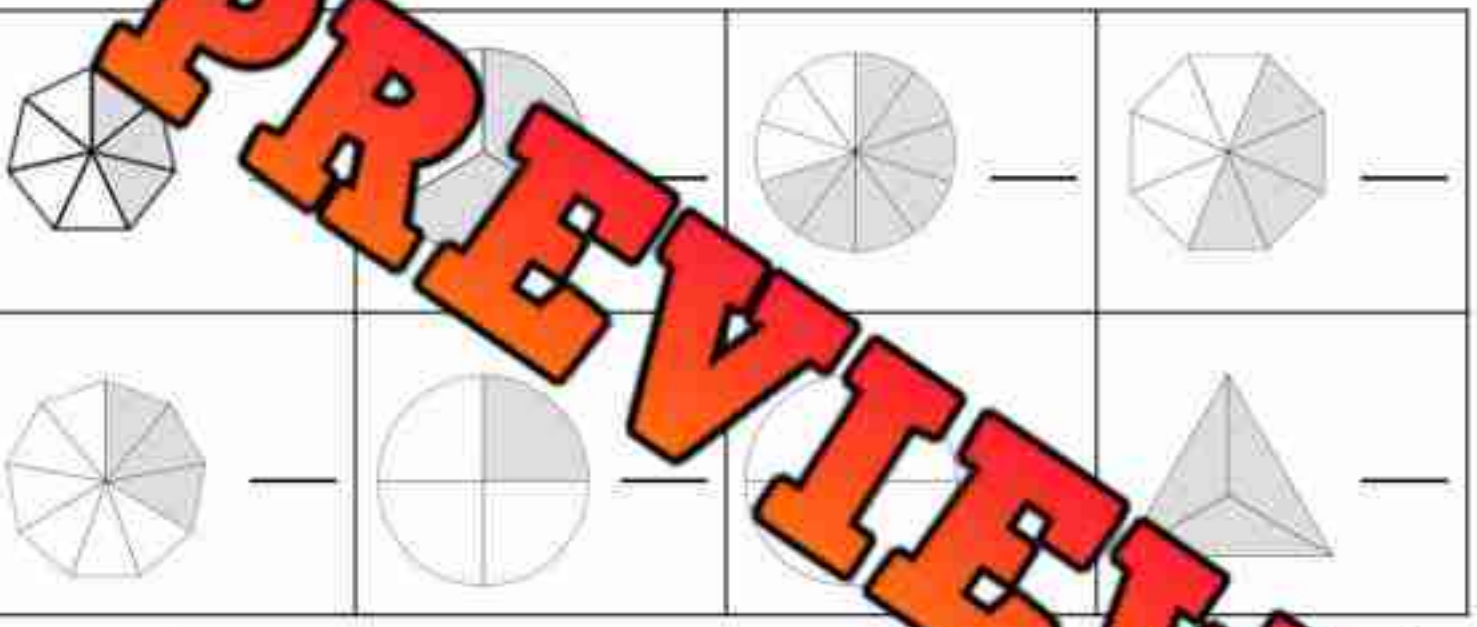
Naming Fractions

Fractions are numbers that represent an amount or quantity. Fractions are usually not whole numbers, but only fractions or parts of a whole number.

Example:
This pizza has been cut into 5 pieces. You are given the shaded slices of pizza, therefore, you received ⅗ of the pizza. You do not get the whole pizza, so you are only getting part or a fraction of the 1 pizza.

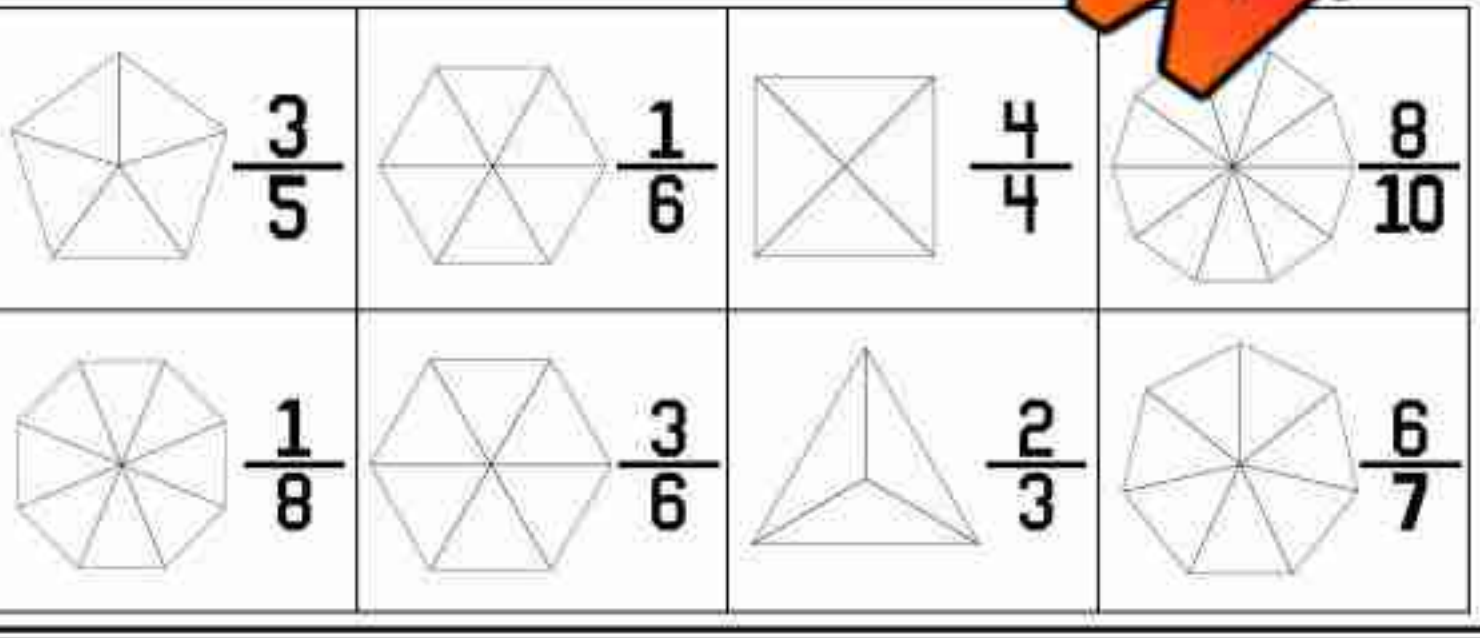
Part 1

t fraction is shaded in on the images below



Part 2

Read the fraction and draw the shaded in valu on t



Name: _____ 60

Curriculum Connection
D1.6

Fractions - Equal Parts

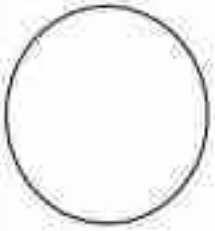
Fractions have two numbers that are important to remember. The **numerator** is the number on top and the **denominator** is the number on the bottom.

$\frac{3}{4}$ → Numerator – How many parts you have

→ Denominator – The total number of parts in the whole

The denominator must be split into equal parts in order for a fraction to be accurate. Imagine getting a pizza with a friend and splitting it into 2 huge pieces. You get one and they get the oth[illegible] pizza is not split evenly, you are not splitting it in half (½)!

Part 1 [illegible] following fractions
- [illegible] inator. Remember to split the denominator equally!
- [illegible] of the numerator – How many parts you're getting.

1.  $\frac{1}{2}$	[illegible]	3.  $\frac{5}{6}$	4.  $\frac{2}{8}$
5. $\frac{4}{4}$	6. $\frac{1}{5}$	[illegible] $\frac{3}{7}$	[illegible] $\frac{}{3}$

Part 2 Answer the word problems below

1) You are splitting a chocolate bar with 2 other friends. How much of the chocolate bar do you get?

_____

2) What do you notice about ½ and ¾ from the questions above? Which amount of chocolate bar would you prefer – ½ or ¾?

_____

_____

Name: _____ 61

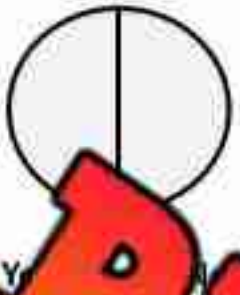
Curriculum Connection
01.6

Fractions - Equal Parts

Part 1

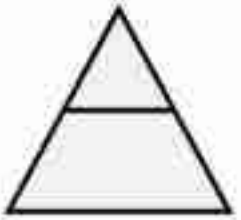
Are the shapes below split into equal parts?

1)



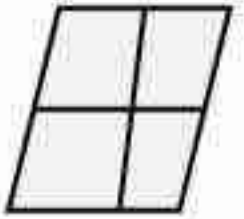
Yes No

2)



Yes No

3)



Yes No

4)

Yes No

5)

Yes No

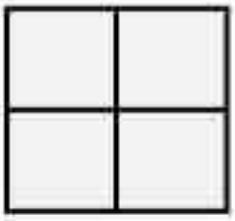
6)

Yes No

Part 2

Are the statements true or

1) The square is cut into fourths



True False

2) The circle is cut int

True False

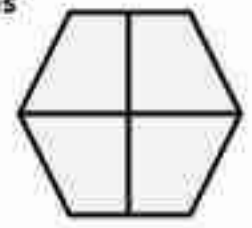
is cut into

True False

4) The pentagon is cut into halves

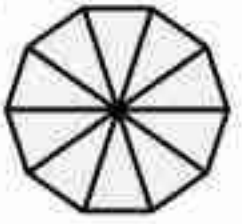
True False

5) The hexagon is cut into fourths



True False

6) The octagon is cut into eights



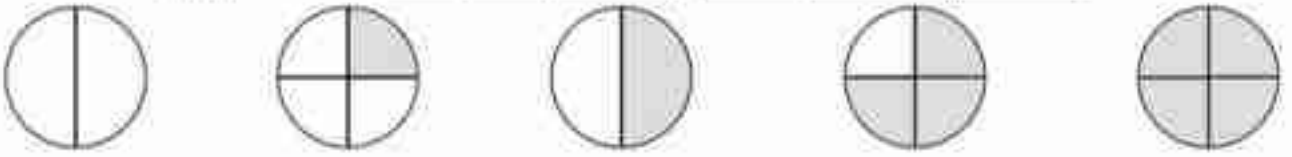
True False

Name: _____ 62

Curriculum Connection
D1.6

Benchmark Fractions

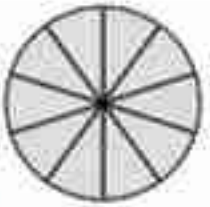
We use benchmark fractions to estimate parts of a whole. The benchmark fractions that are most popular are: zero, half, whole, quarter, three-quarters.



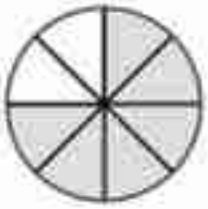
Zero | One-Quarter | Half | Three-Quarter | Whole

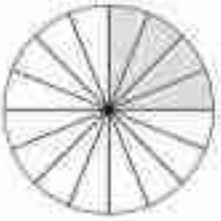
Part 1 Write the fraction and then label it using the benchmarks above

1. 

3. 

4. 

5. 

6. 

Part 2 Write as many fractions of each benchmark as you can

Zero	One-Quarter	Half	Three-Quarters	Whole
$\frac{0}{1}$	$\frac{3}{12}$	$\frac{8}{16}$	$\frac{9}{12}$	$\frac{1}{1}$

Name: _____ 63

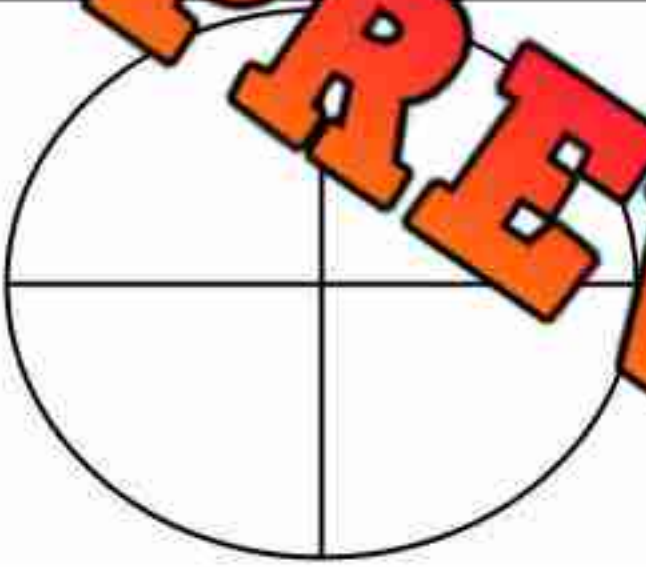
Curriculum Connection
01.6

Pizza Fractions

Directions Draw the pizzas below based on the customer's requests

Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

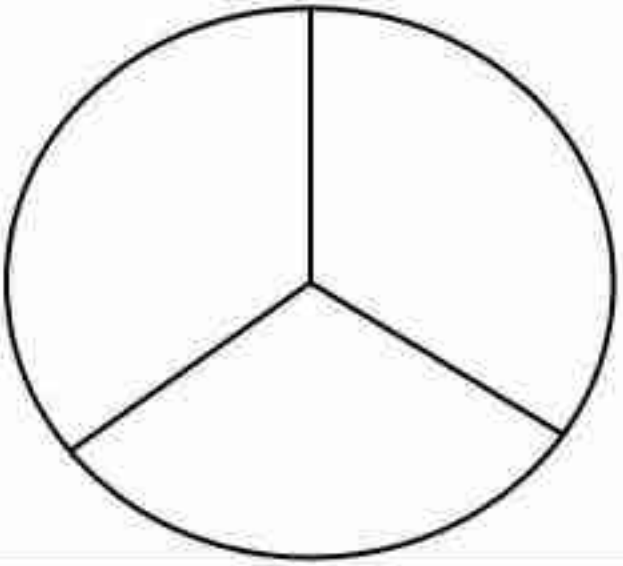
1) One-fo[illegible] has bacon, and three-fourths has onion



_____ Bacon

_____ Onion

2) One-third of the pizza has olives, one-third has bacon, and one-thir[illegible]



_____ Olives

_____ Bacon

_____ Mushrooms

Name: _____ 64

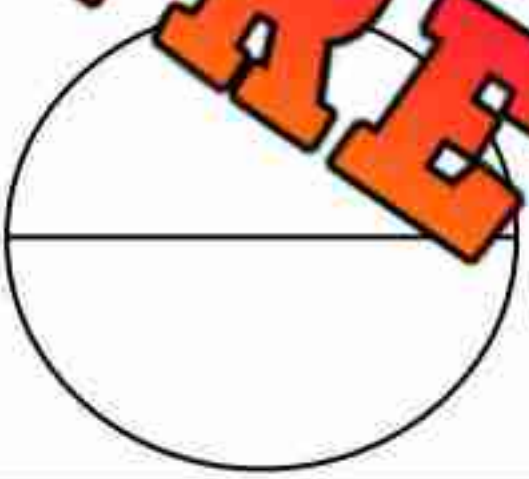
Curriculum Connection
01.6

Pizza Fractions

Directions Draw the pizzas below based on the customer's requests

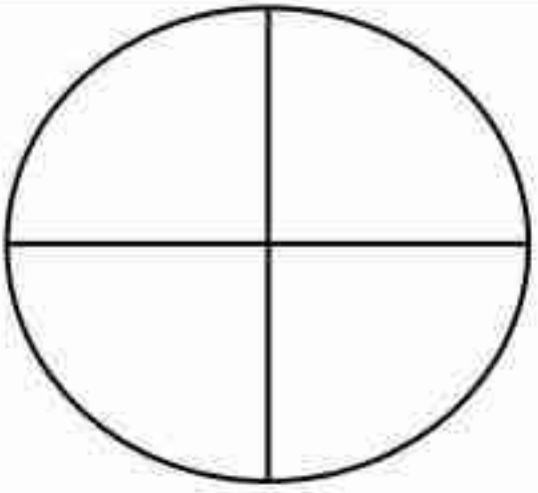
Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

1) One-h… …d bacon and one-half p…

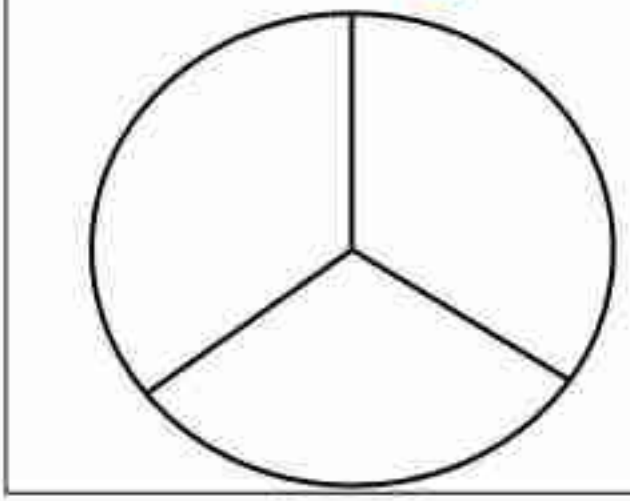


2) One-fourth olives and onion and three-fourths bacon and mushrooms

3) One-half pineapple and bacon, one-fourth pepperoni and one-fourth onion



4) One-third …shro… …e-third onion and on… …and pepperoni



Name: _____ 67

Curriculum Connection
01.6

Pizza Fractions - My Favourite (Fourths)

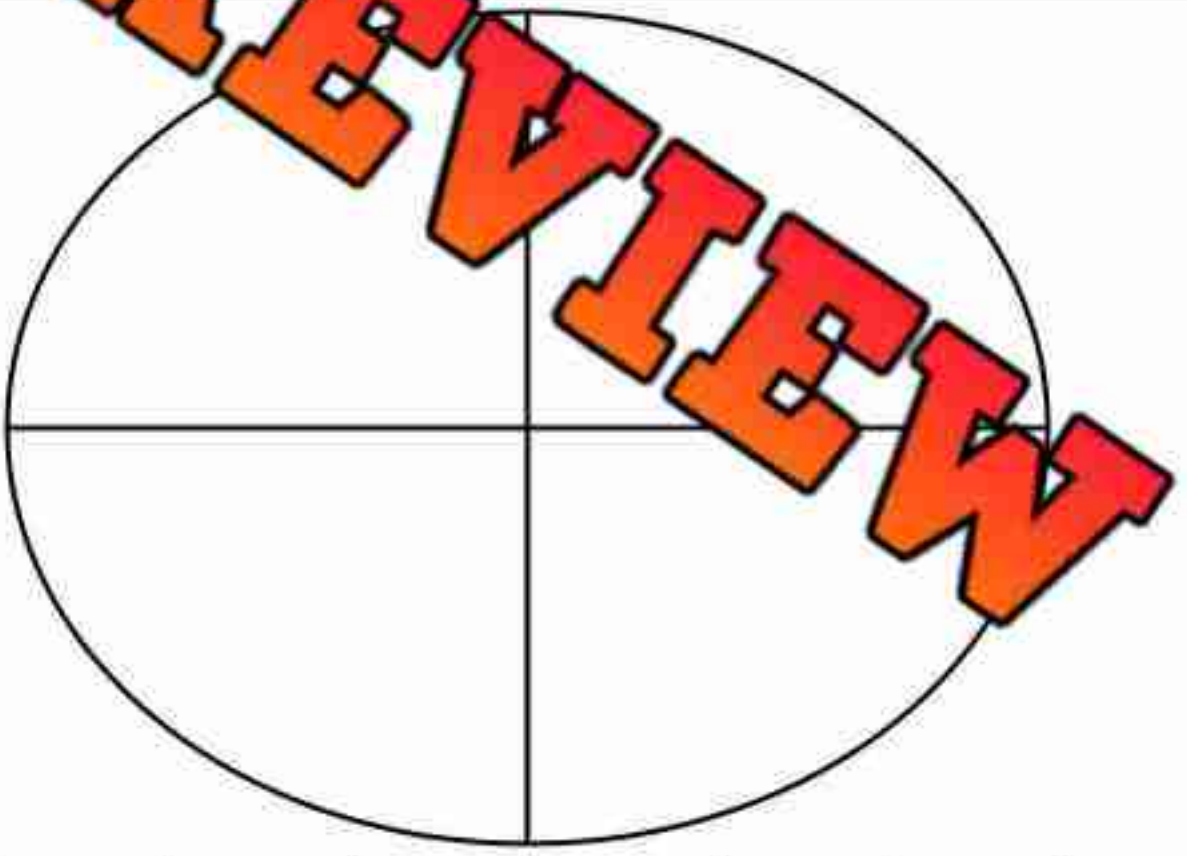
Directions Create a pizza that has 2 different combinations of toppings

Pepperoni	Bacon	Olives	Pineapple	Onion	Mushroom
					

What's on the pizza?

_____

_____



_____ Topping

_____ Topping

_____ Topping

_____ Topping

Name: _____ 69

Curriculum Connection
D1.7

Equivalent Fractions

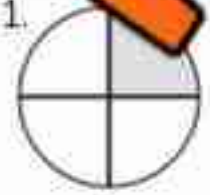
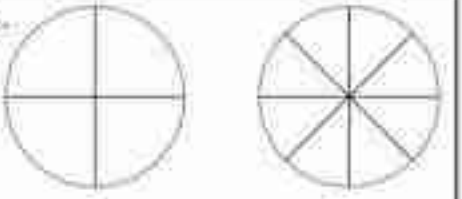
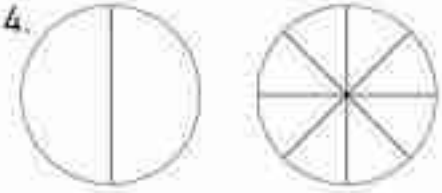
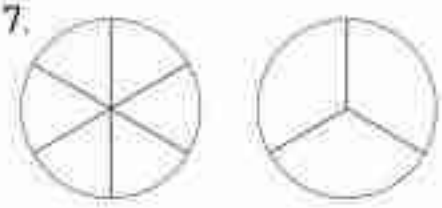
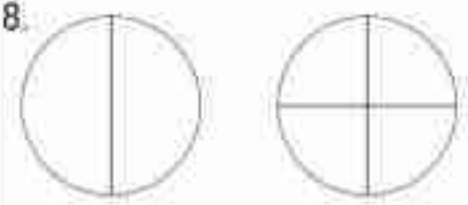
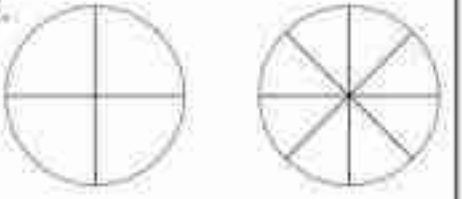
Equivalent fractions are fractions that have the same value. Visualize this...

Pizza 1

Pizza 2

Your family orders large 2 pizzas. The first one is cut into only 4 slices. The second is cut into 8 slices. You could have 2 slices from pizza 1 and 4 slices from 2 and still have the same amount of pizza.

Question: Shade in the fraction and decide if they are equivalent

1.  $\frac{1}{4}$  $\frac{3}{6}$ Yes (No)	2.  $\frac{2}{6}$ $\frac{1}{3}$ Yes No	3.  $\frac{3}{4}$ $\frac{5}{8}$ Yes No
4.  $\frac{1}{2}$ $\frac{4}{8}$ Yes No	5.  $\frac{2}{8}$ $\frac{2}{4}$ Yes No	 $\frac{3}{4}$ $\frac{4}{4}$ Yes No
7.  $\frac{3}{6}$ $\frac{1}{3}$ Yes No	8.  $\frac{1}{2}$ $\frac{2}{4}$ Yes No	9.  $\frac{3}{4}$ $\frac{6}{8}$ Yes No

Name: _____ 70

Curriculum Connection
01.7

Equivalent Fractions

Questions Shade in the fraction and decide if they are equivalent

1.

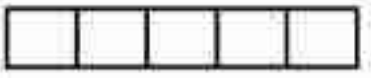
$\frac{1}{3}$

$\frac{2}{6}$

Yes No

2.

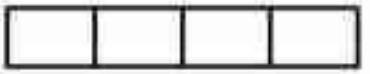
$\frac{2}{10}$



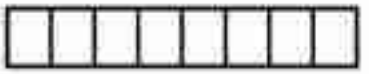
$\frac{1}{5}$

Yes No

3.



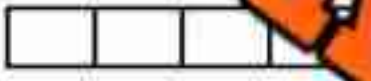
$\frac{3}{4}$



$\frac{7}{8}$

Yes No

4.



$\frac{4}{8}$

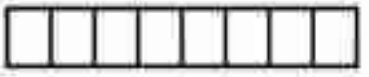
Yes No

5.

$\frac{1}{6}$

Yes No

6.

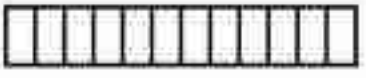


$\frac{3}{8}$

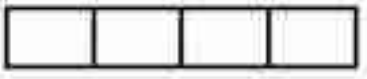
$\frac{2}{4}$

Yes No

7.



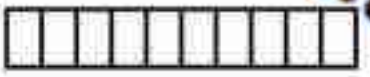
$\frac{3}{12}$



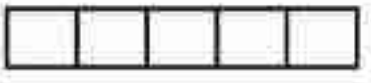
$\frac{1}{4}$

Yes No

8.



$\frac{1}{7}$



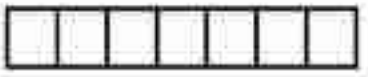
$\frac{2}{5}$

Yes No

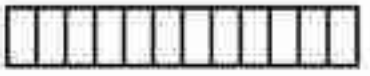
$\frac{2}{14}$

Yes No

7.



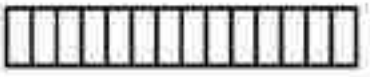
$\frac{5}{7}$



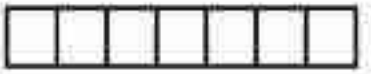
$\frac{10}{12}$

Yes No

8.



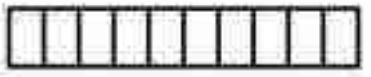
$\frac{10}{14}$



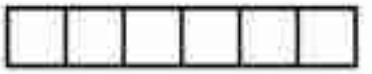
$\frac{5}{7}$

Yes No

9.



$\frac{8}{10}$



$\frac{4}{6}$

Yes No

Name: _____ 71

Number Sense Quiz

Part 1 Round the numbers to the nearest 10

1) 37 → _____	2) 42 → _____	3) 55 → _____

Part 2 Round the numbers to the nearest 100

1) 17	2) 250 → _____	3) 365 → _____

Part 3 re llowing numbers: < > =

1) 84 ☐ 89		3) 318 ☐ 381
4) 584 ☐ 499	5) 847 ☐	6) ☐ 953

Part 4 Order the numbers below from lea test

128, 119, 125, 153, 222	243, 165,
_____, _____, _____, _____, _____	_____, _____, _____, _____, _____

Part 5 Order the numbers below from greatest to least

311, 316, 303, 317, 315	740, 743, 729, 733, 746
_____, _____, _____, _____, _____	_____, _____, _____, _____, _____

Part 6 Fill in the Blanks by counting by 50s, 100s, and 200s

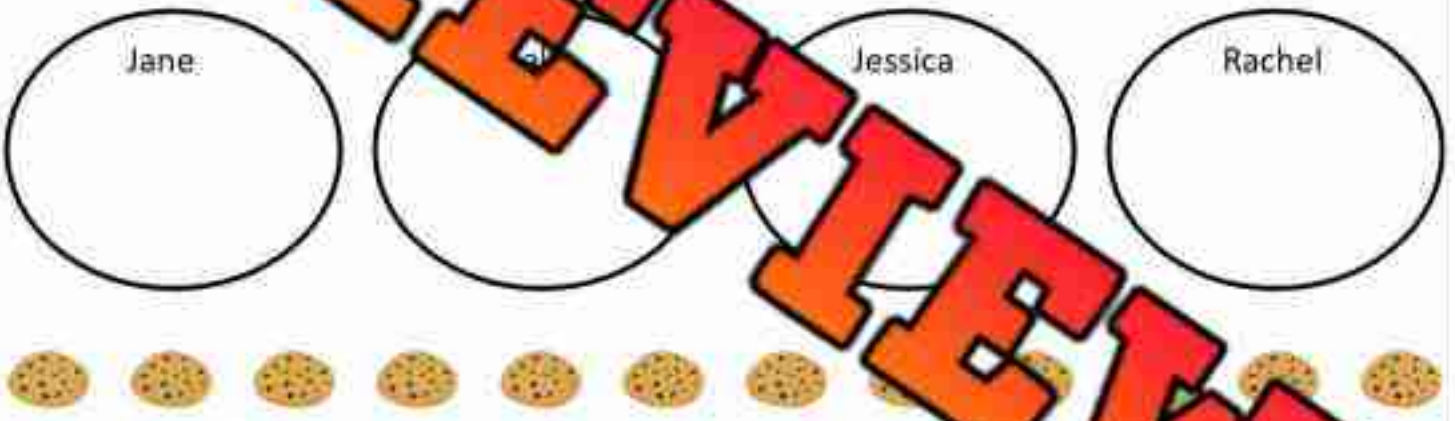
1) 50, 100, 150, _____, _____, _____, _____

2) 100, 200, 300 _____, _____, _____, _____

3) 200 600 _____, _____, _____, _____

Part re the cookies below

Four friends are ook w. Draw lines from the cookies to each person's plate.



How many cookies does each friend get? _____

Part 8 Draw the fractions and then indicate if the fractions are eq ent or not.

½	2/6	3/5
2/4	1/3	6/10
_____	_____	_____

Grade 3
Strand: B2 – Operations

	Curriculum Expectations	Pages That Cover the Expectations
B2.1	use the properties of operations, and the relationships between multiplication and division, to solve problems and ch[illegible] calculations	74 – 79, 92 – 94, 111 – 114, 121 – 122, 181 – 184
B2.2	[illegible]monstrate multiplication facts of 2, 5, and 10, [illegible] facts	74 – 122
B2.3	[illegible] men[illegible]te[illegible]s, including estimation, to add and s[illegible] nu[illegible]hat add up to no more than 1000, an[illegible]n the [illegible]sed	125 – 138, 157 – 164, 180
B2.4	demonstrate an [illegible]ding o[illegible]thms for adding and subtracting whole [illegible]y [illegible]ctions to and describing the way oth[illegible]ols [illegible] used to add and subtract	125 – 180
B2.5	represent and solve problems involving t[illegible]dition subtraction of whole numbers that ad[illegible]o m[illegible] 1000, using various tools and algorithms	125, 131 – 157, 162 – 180
B2.6	represent multiplication of numbers up to 10 × 10 division up to 100 ÷ 10, using a variety of tools and drawings, including arrays	
B2.7	represent and solve problems involving multiplication and division, including problems that involve groups of one half, one fourth, and one third, using tools and drawings	188 –
B2.8	represent the connection between the numerator of a fraction and the repeated addition of the unit fraction with the same denominator using various tools and drawings, and standard fractional notation	189 – 199
B2.9	use the ratios of 1 to 2, 1 to 5, and 1 to 10 to scale up numbers and to solve problems	200 – 204

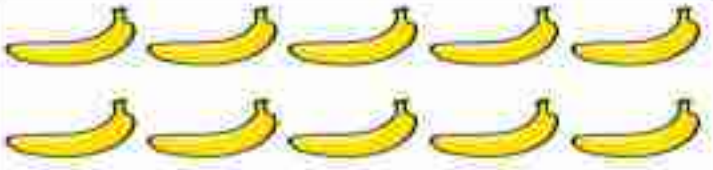
Name: _____ 74

Curriculum Correlation
B2.1, B2.2, B2.6

Multiplication - Repeated Addition

Questions | Fill in the blanks below

6 + [illegible] or 6 x 2 = 12



_____ + _____ = _____

_____ x _____ = _____

_____ + _____ = _____

_____ x _____ = _____

_____ + _____ + _____ = _____

_____ x _____ = _____

_____ + _____ = _____

_____ x _____ = _____

_____ + _____ = _____

_____ x _____ = _____

_____ + _____ = _____

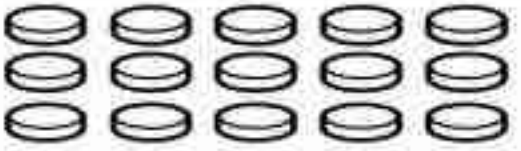
_____ x _____ = _____

_____ + _____ = _____

_____ x _____ = _____

_____ + _____ = _____

_____ x _____ = _____



_____ + _____ + _____ = _____

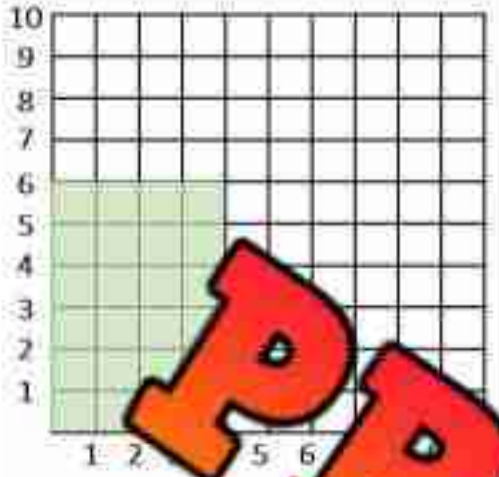
_____ x _____ = _____

Name: _____ 76

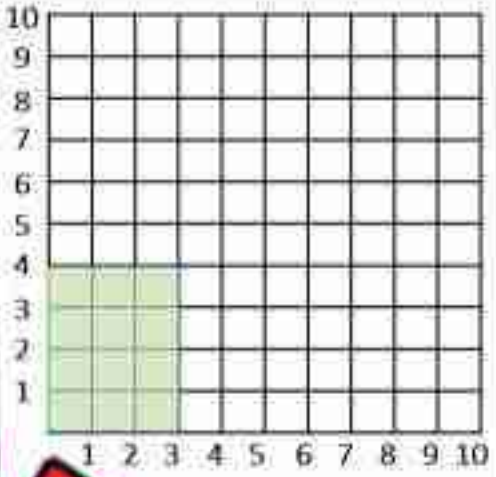
Curriculum Correlation
B2.1, B2.2, B2.6

Multiplication - Arrays

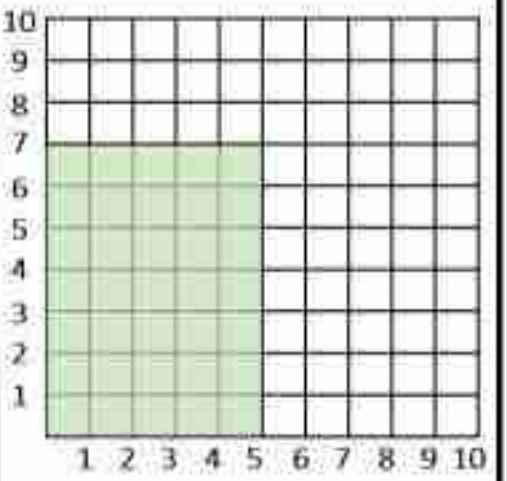
Questions How much is shaded in? Answer the questions below.



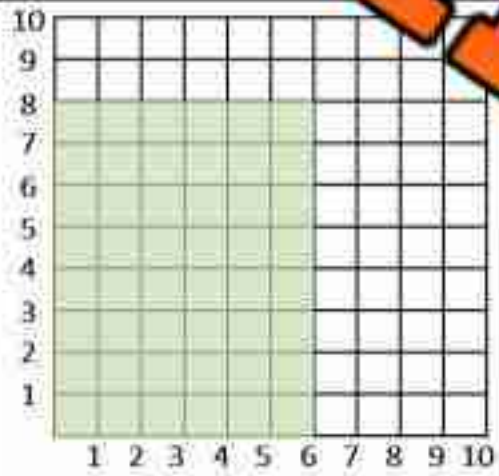
6 x 4 = _____



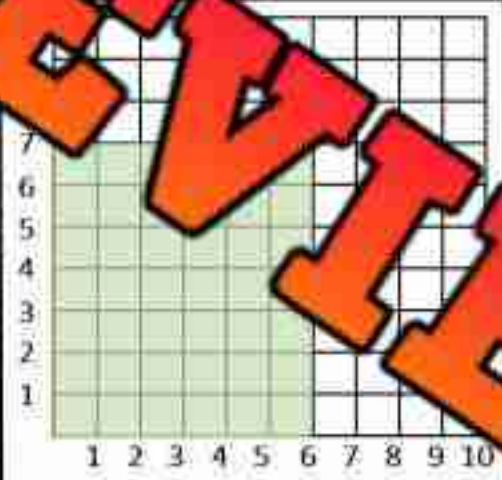
_____ = _____



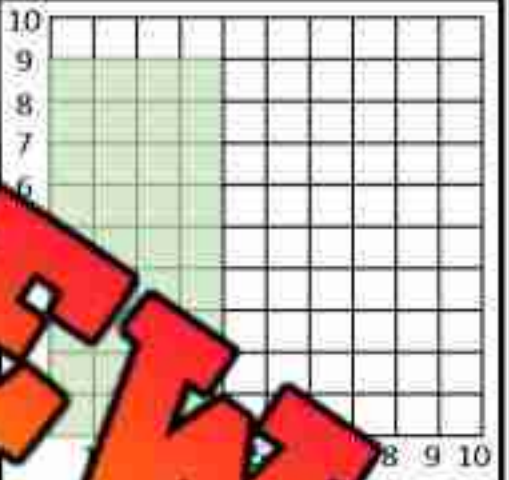
7 x 5 = _____



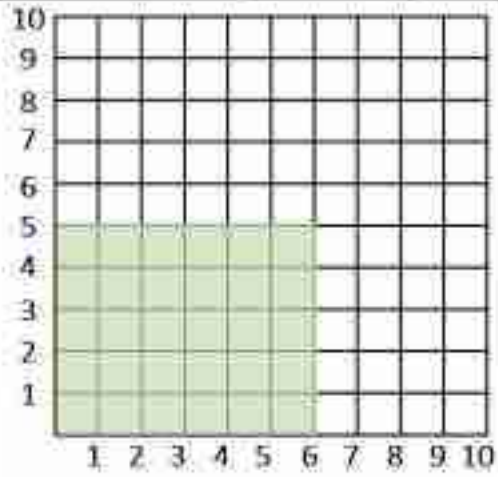
8 x 6 = _____



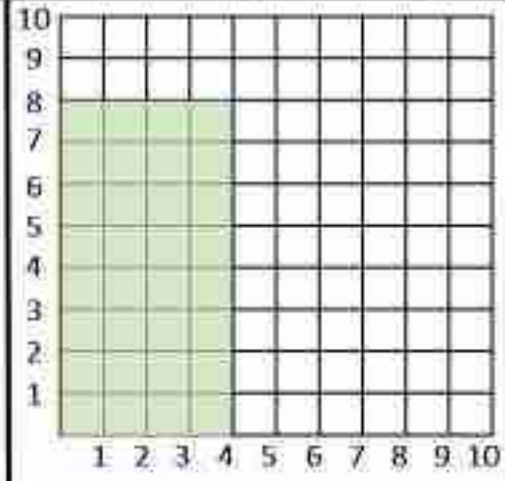
7 x 6 = _____



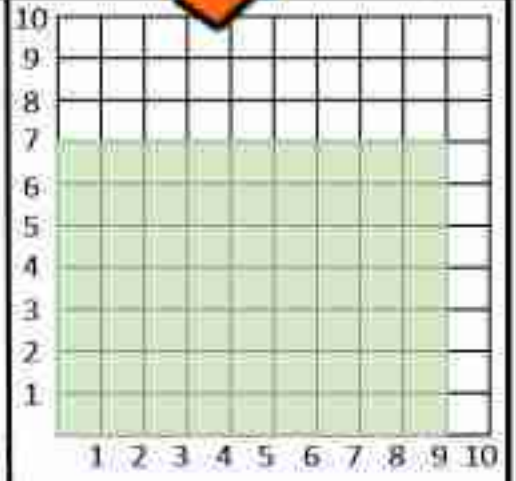
9 x _____



5 x 6 = _____



8 x 4 = _____



7 x 9 = _____

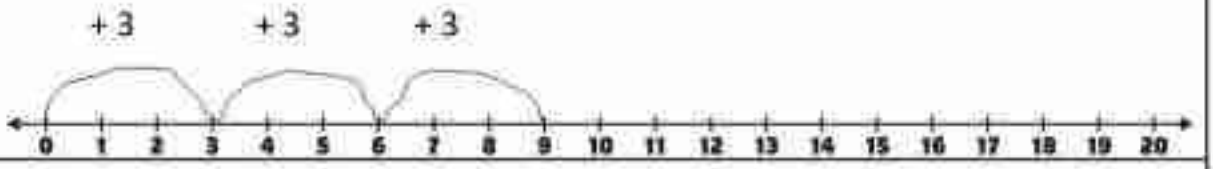
Name: _____ 79

Curriculum Correlation
B2.1, B2.2, B2.6

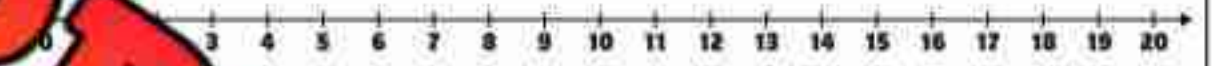
Number Line Multiplication - Repeated Addition

Questions | Fill in the blanks below

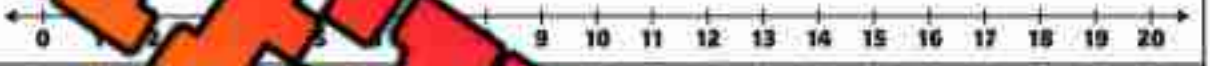
3 x 3 = 9



5 x 4 = ____

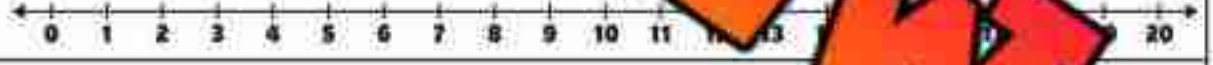


4 x 4 = ____

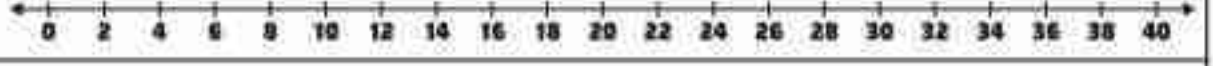


6 x 3 = ____

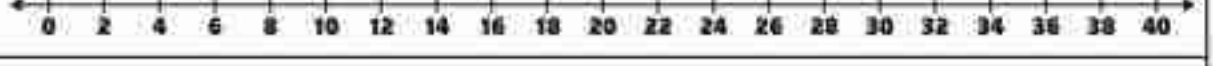
2 x 9 = ____



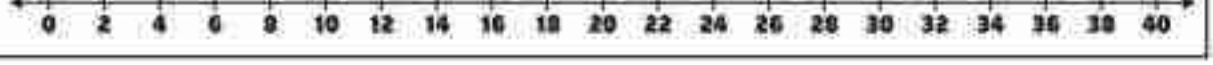
4 x 8 = ____



10 x 4 = ____



4 x 6 = ____



Name: _____ 81

Curriculum Connection
B2.2, B2.4

Mental Math - Multiplication - Skip Counting

Directions:

1. Decide which number is easier to count by
2. Count by that number the other number amount of times

$7 \times 5 = ?$

1 2 3 4 5 6 7

5, 10, 15, 20, 25, 30, 35

x 4	9 x 3
6 x 5	7 x 6
9 x 5	1
4 x 9	8 x 9

Name: _____ 82

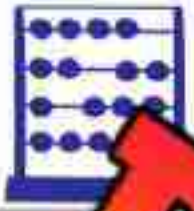
Curriculum Connection
B2.2, B2.4

Mental Math - Multiplication - Doubling and Halving

Directions

1. Halve one of the numbers and double the other number (2 options)
2. Multiply the new numbers together

Example



6 x 4

Option 1: 12 x 2 or Option 2: 3 x 8

↓ 24 ↓ 24

4	10 x 4
8 x 4	5 x 6
3 x 8	7 x
10 x 6	6 x 8
5 x 4	20 x 4

Name: _____ 83

Curriculum Connection
B2.2, B2.4

Mental Math - Multiplication - Doubling and Halving

Directions

1. Halve one of the numbers to make the equation simpler
2. Solve the equation
3. Double the product (answer)

Example

8 x 4
4 x 4 = 16
16 x 2 = 32

	3 x 8
6 x 5	10 x 6
6 x 4	4 x
3 x 6	5 x 8
10 x 10	7 x 4

Name: _____ 91

Curriculum Connection
B2.2, B2.4

Multiplication Drill - 2s, 5s, 10s

Questions

Solve as many problems as you can before the time runs out!

_____
36

3 x 2	4 x 5	2 x 2	5 x 3	10 x 5	5 x 6
2 x [illegible]	[illegible] x [illegible]	5 x 5	4 x 3	1 x 5	10 x 3
10 x 1	5 x 0	[illegible] x 8	5 x [illegible]	9 x 10	2 x 5
2 x 7	1 x 10	5 x 5	x 4	x [illegible]	5 x 8
9 x 5	10 x 7	5 x 7	2 x 4	5 x 10	0 x 10
5 x 0	5 x 2	10 x 4	4 x 5	5 x 9	10 x 8

Name: _____ 92

Curriculum Correlation
B2.1, B2.2, B2.6

Multiplication - Repeated Addition

Part 1

Fill in the blanks below

2 + 2 + 2 + 2 = 8 4 x 2 = 8 4 groups of 2	5 + 5 + 5 = ____ ____ x ____ = ____ ____ groups of ____
4 + 4 + 4 = ____ ____ x ____ = ____ ____ groups of ____	8 + 8 + 8 = ____ ____ x ____ = ____ ____ groups of ____
3 + 3 + 3 + 3 + 3 ____ x ____ = ____ ____ groups of ____	1 + 1 + 1 + 1 + 1 + 1 + 1= ____ ____ x ____ = ____ ____ groups of ____
6 + 6 + 6 + 6 = ____ ____ x ____ = ____ ____ groups of ____	____ + ____ + ____ + ____ + ____ + ____ + ____ = ____ ____ x ____ = ____ ____ groups of ____

Part 2

Answer the question below

Billy cuts his neighbours grass each week for 6 weeks. He makes 10 dollars each time he cuts the grass. How much money does he make in the 6 weeks?

Addition Sentence - _____ + _____ + _____ + _____ + _____ + _____ = _____

Multiplication Equation - _____ x _____ = _____

Therefore, Billy _____

Name: _____ 94

Curriculum Correlation
B2.1, B2.2, B2.4

Multiplication and Division - Total/Groups/Size of Group

Questions Answer the questions below. Use drawings to help you solve the problems

1) John saved 5 dollars a day for 5 days. How much money did he save in total?

Number of Groups = _____

Size of Each Group = _____

Total = _____

2) Ryan buys a $2 [illegible] each [illegible] on vacation. She spends $14 on drinks during her vacation. He [illegible] days [illegible] on vacation?

Number of [illegible] = _____

Size of Each [illegible] = _____

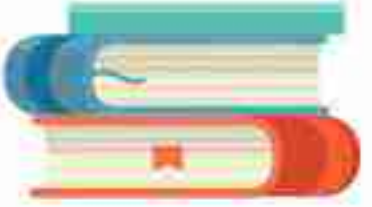
Total = _____

3) Jenna bought 18 books from the 3-day book fair. She bought the same number of books each day of the fair. How many did she buy each day?

Number of Groups = _____

Size of Each Group = _____

Total = _____



Name: _____ 96

Curriculum Connection
B2.2, B2.4

Multiplication Chart - Patterns

Questions Fill in the multiplication table below

x	1	2	3	4	5	6	7	8	9	10
1			3		5		7		9	10
2				8		12		16		
3			9			18			27	30
4	4	8		16			28		36	
5		10	15							
6	6		18		30					60
7		14		28	35	42			63	
8	8	16		32			56	64		80
9			27			54			81	90
10	10	20		40			70		90	

Name: _____ 97

Curriculum Connection
B2.2, B2.4

Multiplication Chart - Patterns

x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40	50	60	70	80	90	100

Questions Follow the instructions below

1) Count by 2's and colour the numbers 

2) Count by 3's and colour the numbers 

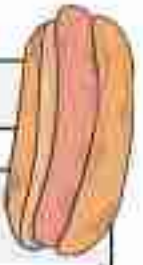
3) Count by 5's and colour the numbers 

4) Count by 10's and colour the numbers 

Name: _____ 101

Curriculum Connection
B2.2, B2.4

Multiplication - Word Problems



Questions Draw a picture to represent the problem and then solve

1) Brian buys 4 packages of hot dog buns. Each package has 6 buns in it. How many hot dog buns did he buy?

Answer	Picture

2) Sheldon walks 3 km to school. He went to school 5 times this week. How many km did he walk this week?

Answer	Picture Use a symbol to represent a km

3) Hanna scored 4 baskets in each of her last 7 games. How many baskets did she score in all 7 games?

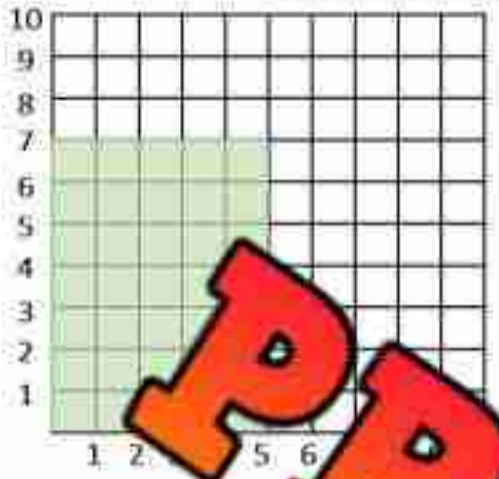
Answer	Picture

Name: _____ 103

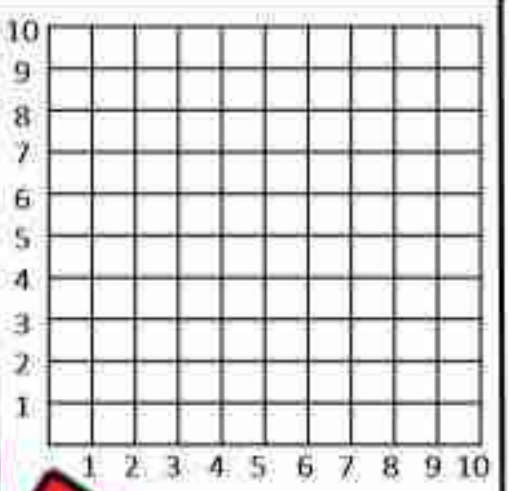
Curriculum Connection
B2.2, B2.4

Division - Arrays

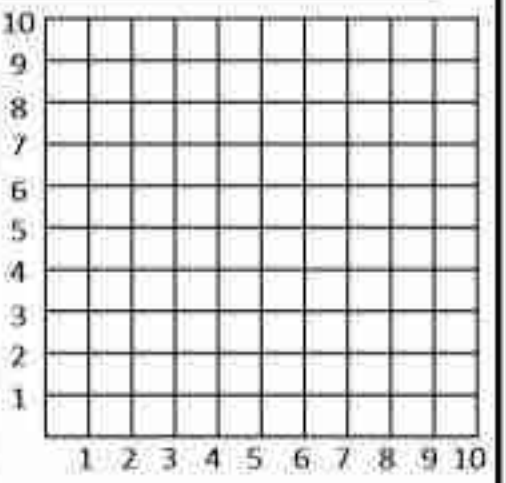
Questions Shade in the arrays using the table. Answer the questions below



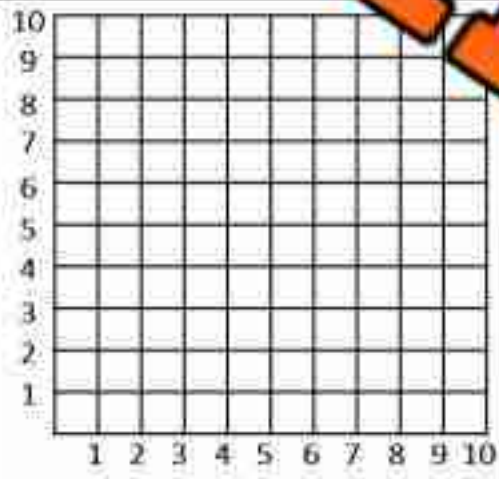
35 ÷ 7 = _____



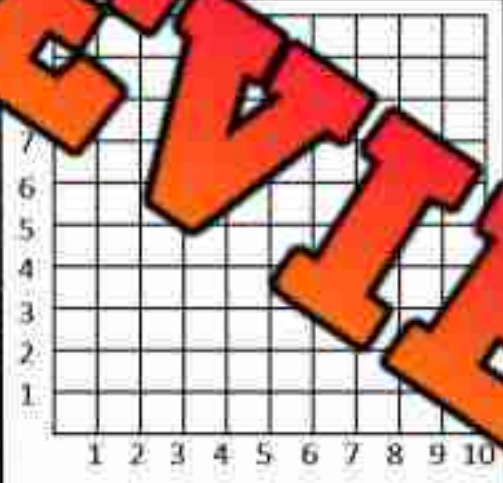
7 = _____



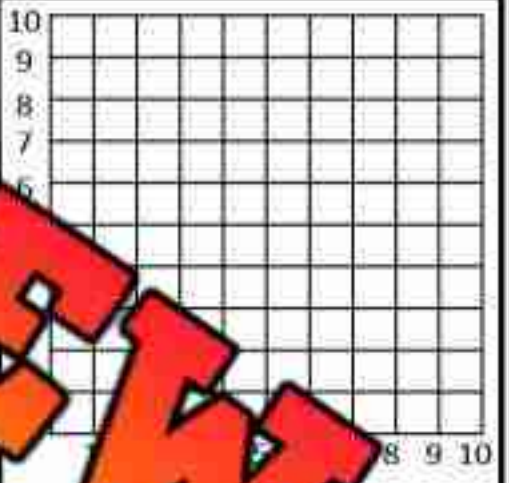
18 ÷ 6 = _____



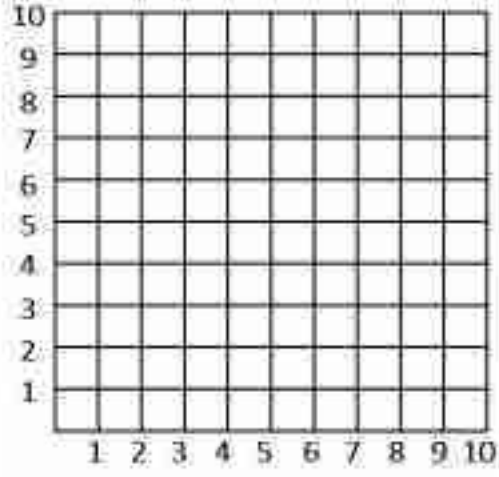
45 ÷ 5 = _____



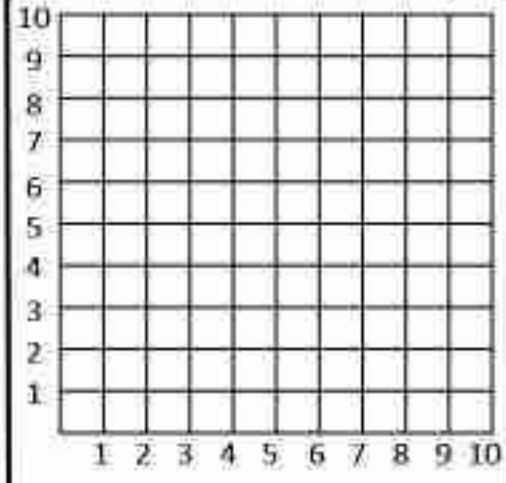
80 ÷ 10 = _____



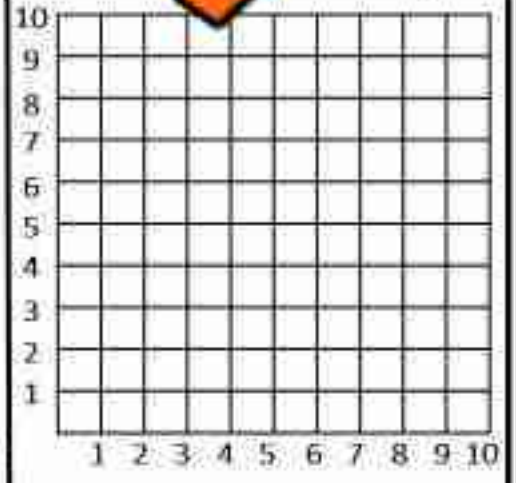
24 ÷ _____



15 ÷ 3 = _____



32 ÷ 4 = _____



50 ÷ 5 = _____

Name: _____ 104

Curriculum Connection
B2.2, B2.4

Division - Equal Sharing

Questions If you were sharing the objects below, how would you split them up equally? Answer the questions below.

Objects	Questions	
	How many objects are there?	
	How many groups did you make?	
	How many are in each group?	
	Write the division sentence	

Objects	Questions	
	How many are	
	How many groups u ma	
	How many are in each g	
	Write the division sentence	

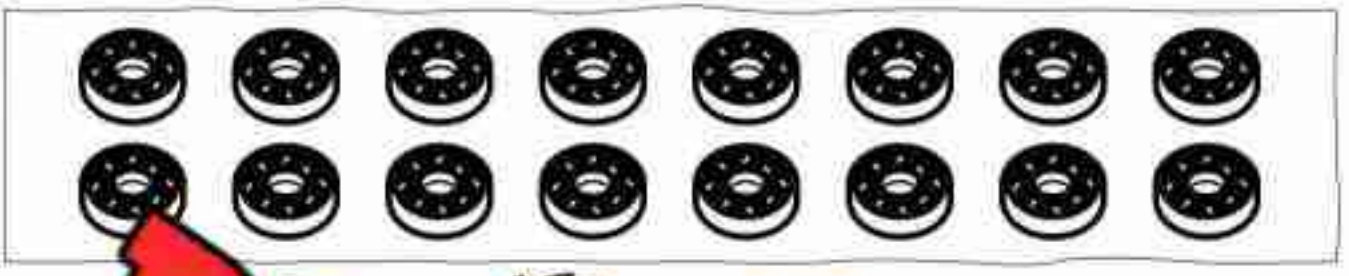
Objects	Questions	
	How many objects are there?	
	How many groups did you make?	
	How many are in each group?	
	Write the division sentence	

Name: _____ 106

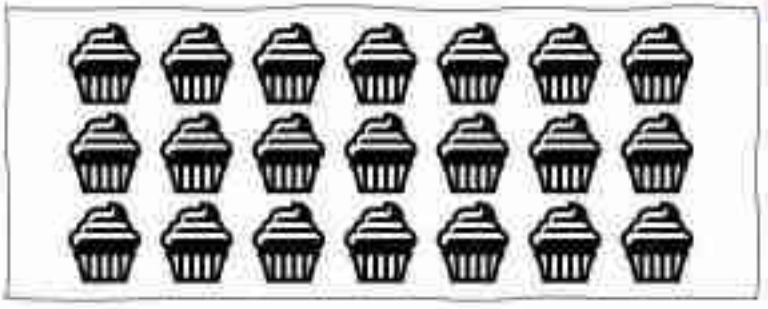
Curriculum Connection
B2.2, B2.4

Division - Equal Sharing

Questions Friends are sharing the treats below. Answer the questions



How many do[illegible] there?	
How many groups d[illegible] donuts?	
How many donuts will be [illegible]	
Write the division sentence	
How many donuts will each person get?	



How many cupcakes are there?	
How many groups do you need to share the cupcakes?	
How many cupcakes will be in each group?	
Write the division sentence	
How many cupcakes will each person get?	

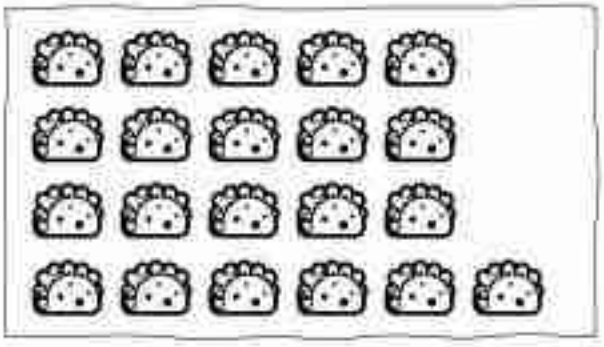
Name: _____ 107

Curriculum Connection
B2.2, B2.4

Division - Equal Sharing

Questions Friends are sharing the food below. Answer the questions

How [illegible] piece[illegible] [illegible]re there?	
How many g[illegible] [illegible] ne[illegible] [illegible]hare the sushi?	
How many pieces [illegible]e i[illegible]	
Write the division senten[illegible]	
How many pieces of sushi wit[illegible]ch	
Are there any pieces of sushi left?	



How many tacos are there?	
How many groups do you need to share the tacos?	
How many tacos will be in each group?	
Write the division sentence	
How many tacos will each person get?	
Are there any tacos left over?	

Name: _____ 108

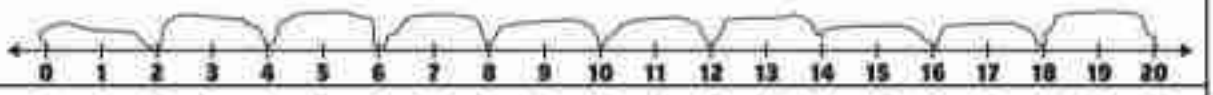
Curriculum Connection
B2.2, B2.4

Number Line Division - Repeated Subtraction

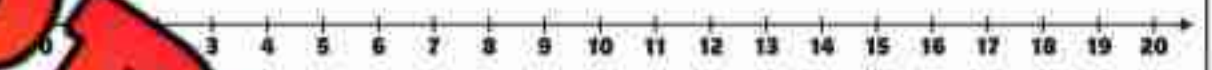
Questions Use repeated subtraction to find the answer

Start at the larger number and subtract the smaller number until you reach zero. Your answer is how many times you subtracted.

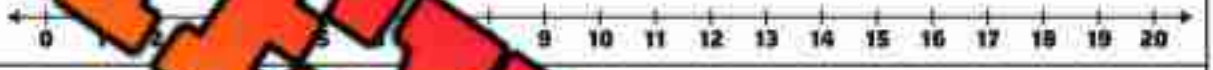
20 ÷ 2 = 10



15 ÷ 5 = ____

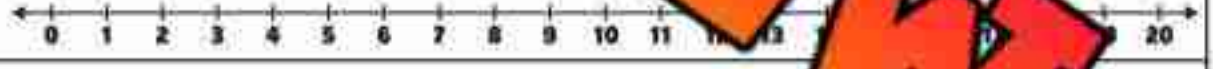


10 ÷ 5 = ____

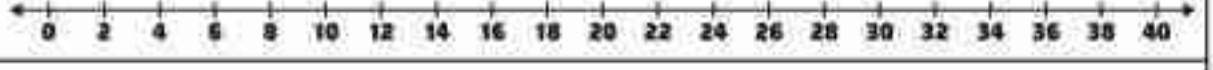


18 ÷ 6 = ____

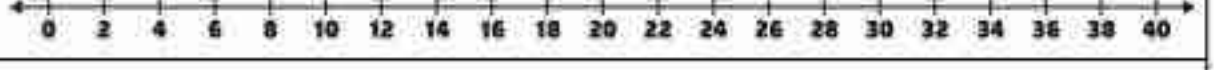
12 ÷ 3 = ____



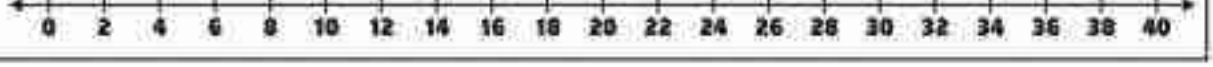
30 ÷ 10 = ____



32 ÷ 4 = ____



36 ÷ 6 = ____



Name: _____ 109

Curriculum Connection
B2.2, B2.4

Mental Math - Division - Skip Counting

Directions:

1. Count up by the smaller number to the larger number
2. The answer is how many times you counted

$91 \times 7 = ?$

1 2 3 4 5 6 7 8 9 10 11 12 13

7, 14, 21, 28, 35, 42, 49, 56, 63, 70, 77, 84, 91

Answer = 13

8	**40 ÷ 5**
16 ÷ 4	**42 ÷ 6**
30 ÷ 5	6
32 ÷ 8	**48 ÷ 6**

Name: _____ 110

Curriculum Connection
B2.2, B2.4

Division - 2s, 5s, 10s

Questions Solve the division equations below

÷ 2	÷ 5	÷ 10
2 ÷ 2 =	5 ÷ 5 =	10 ÷ 10 =
4 ÷ 2 =	10 ÷ 5 =	20 ÷ 10 =
6 ÷ 2 =	15 ÷ 5 =	30 ÷ 10 =
8 ÷ 2 =	20 ÷ 5 =	40 ÷ 10 =
10 ÷ 2 =	25 ÷ 5 =	50 ÷ 10 =
12 ÷ 2 =	30 ÷ 5 =	60 ÷ 10 =
14 ÷ 2 =	35 ÷ 5 =	70 ÷ 10 =
16 ÷ 2 =	40 ÷ 5 =	80 ÷ 10 =
18 ÷ 2 =	45 ÷ 5 =	90 ÷ 10 =
20 ÷ 2 =	50 ÷ 5 =	100 ÷ 10 =

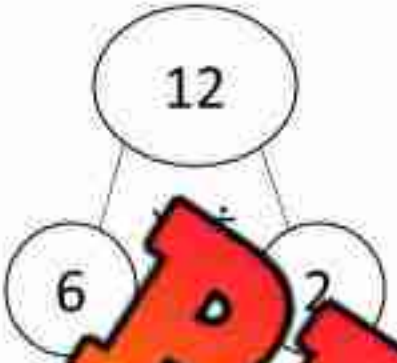
Name: _____ 111

Curriculum Correlation
B2.1, B2.2, B2.6

Multiplication and Division

Questions

Investigate the relationship between multiplication and division

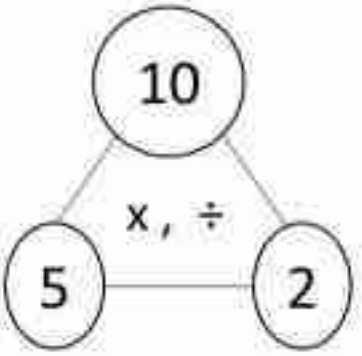


6 x 2 = 12

2 x 6 = 12

12 ÷ 6 = 2

12 ÷ 2 = 6

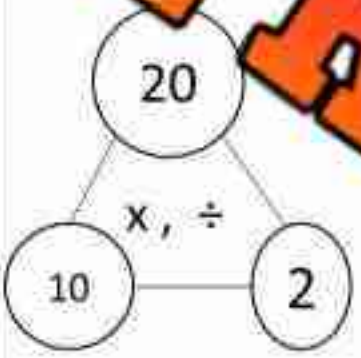


___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

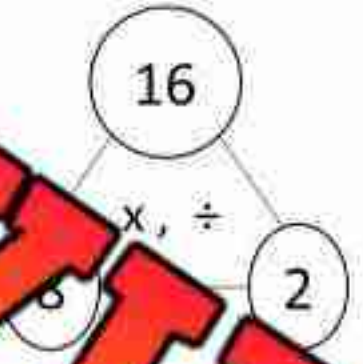


___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

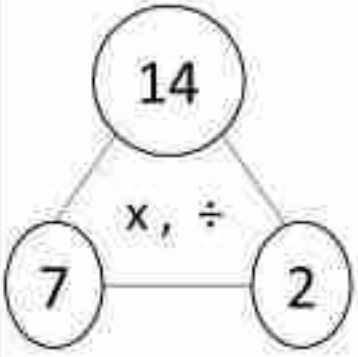


___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

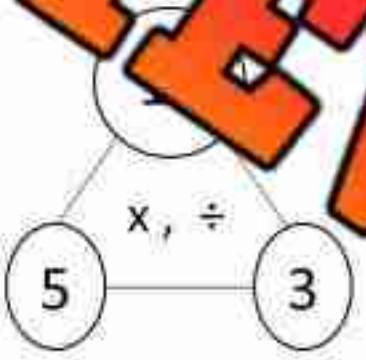


___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

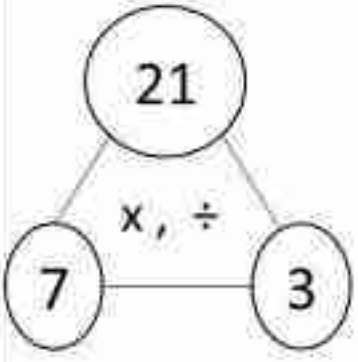


___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

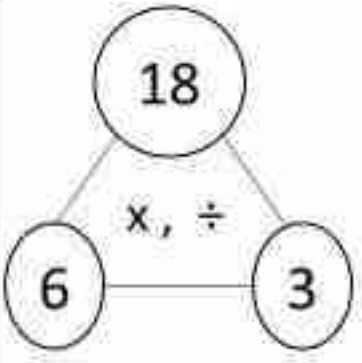


___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___



___ x ___ = ___

___ x ___ = ___

___ ÷ ___ = ___

___ ÷ ___ = ___

Name: _____ 121

Curriculum Connection
B2.1, B2.2, B2.4

Multiplication and Division - 2s, 5s, 10s

Questions Investigate the relationship between multiplication and division

x 2	÷ 2	x 5	÷ 5	x 10	÷ 10
2 x 1 =	2 ÷ 2 =	5 x 1 =	5 ÷ 5 =	10 x 1 =	10 ÷ 10 =
2 x 2 =		5 x 2 =	10 ÷ 5 =	10 x 2 =	20 ÷ 10 =
2 x 3 =			15 ÷ 5 =	10 x 3 =	30 ÷ 10 =
2 x 4 =	8 ÷ 2 =			10 x 4 =	40 ÷ 10 =
2 x 5 =	10 ÷ 2 =	5 x 5 =	25		50 ÷ 10 =
2 x 6 =	12 ÷ 2 =	5 x 6 =	30 ÷ 5 =	6	10 =
2 x 7 =	14 ÷ 2 =	5 x 7 =	35 ÷ 5 =	10 x 7 =	0 ÷ 10 =
2 x 8 =	16 ÷ 2 =	5 x 8 =	40 ÷ 5 =	10 x 8 =	80 ÷ 10 =
2 x 9 =	18 ÷ 2 =	5 x 9 =	45 ÷ 5 =	10 x 9 =	90 ÷ 10 =
2 x 10 =	20 ÷ 2 =	5 x 10 =	50 ÷ 5 =	10 x 10 =	100 ÷ 10 =

Name: _____ 123

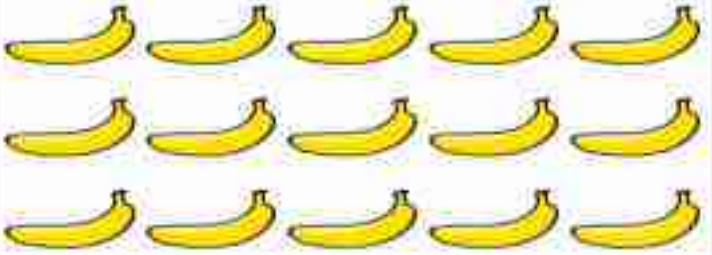
Multiplication and Division Quiz

Part 1

Fill in the blanks with the addition and multiplication equations

_____ + _____ + _____ = _____

_____ X _____ = _____



_____ + _____ + _____ = _____

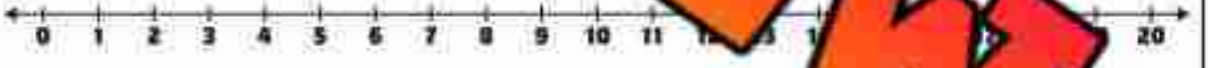
_____ X _____ = _____

Part 2

Use addition to answer the questions

3 x 5 = _____

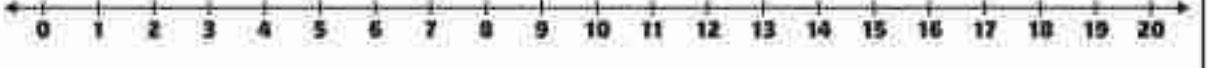
9 x 2 = _____



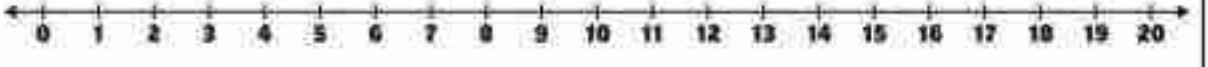
Part 3

Use repeated subtraction to find the answer

12 ÷ 3 = _____

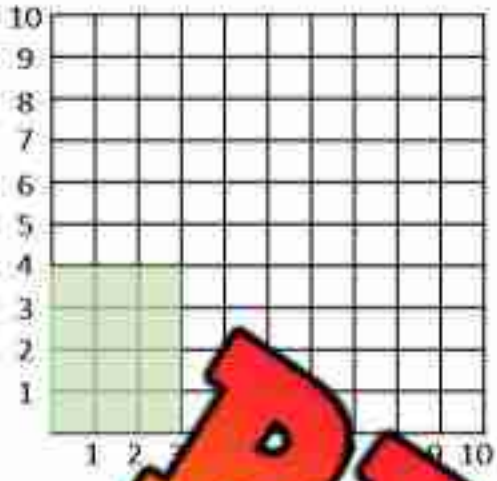


15 ÷ 5 = _____

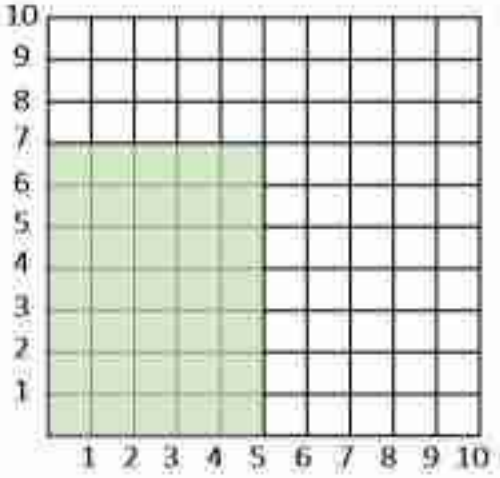


Part 4

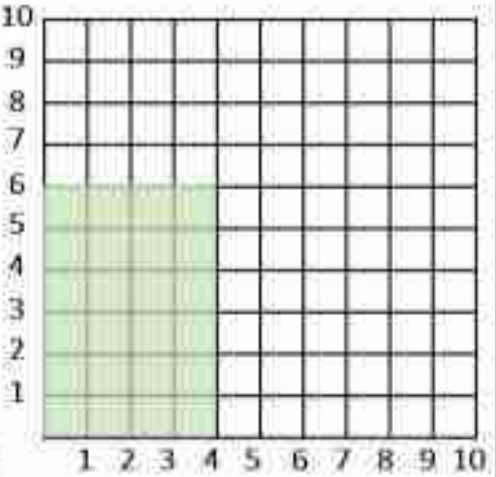
How much is shaded in? Answer the questions below



4 x ____ = ____



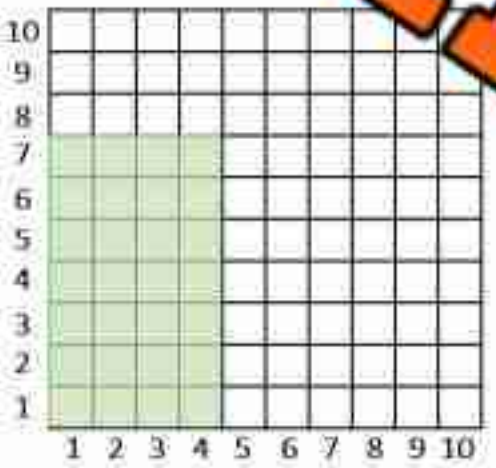
7 x 5 = ____



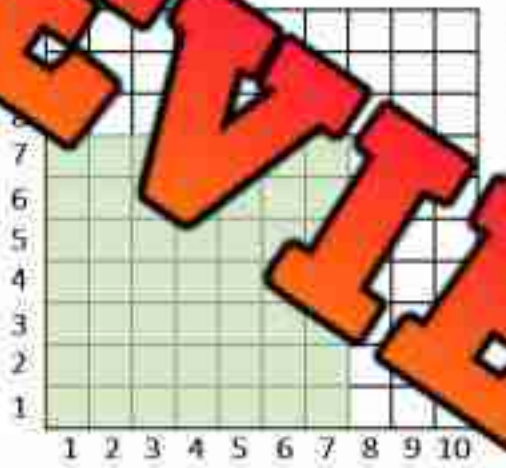
4 x 6 = ____

Part 5

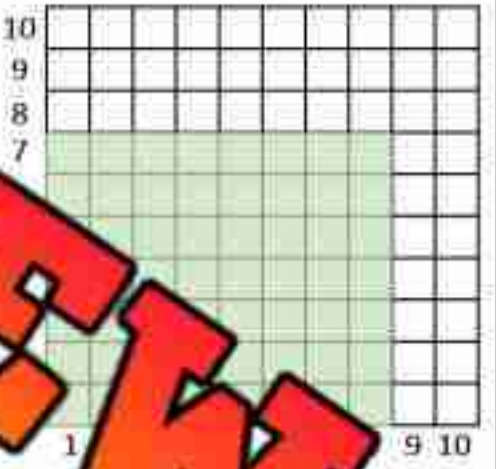
How is the shaded in area divided?



28 ÷ 4 = ____



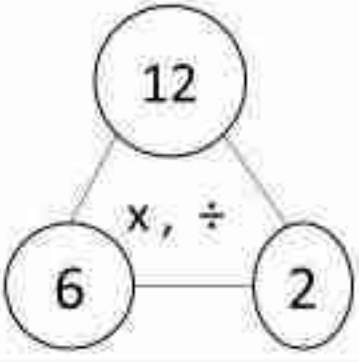
49 ÷ 7 = ____



56 ÷ ____

Part 6

Investigate the relationship between multiplication and division

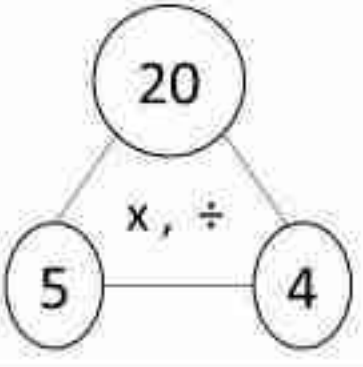


____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____



____ x ____ = ____

____ x ____ = ____

____ ÷ ____ = ____

____ ÷ ____ = ____

Name: _____ 125

Curriculum Connection
B2.3, B2.4, B2.5

Estimate and Add

Part 1 Round these numbers to the nearest ten. Then add the numbers together

22 → 20 + 11 → + 10 30	38 → ____ + 32 → + ____
____ → ____ + 28 → + ____	61 → ____ + 43 → + ____

Part 2 Round these numbers to the nearest hundred. Then add the numbers together

104 → 100 + 211 → + 200 300	____ → ____ ____ → + ____
598 → ____ + 108 → + ____	413 → ____ + 482 → + ____

Part 3 Estimate the numbers to determine approximately how many points he scored

Tom scores 18 points in his first basketball game. He scores 29 in his second game. Approximately how many points did Tom score in both games combined?

Name: _____ 126

Curriculum Connection
G2.3, G2.4

Mental Math - Counting On (Up To 20)

Directions:
1. Circle the higher number on the hundreds chart/number line.
2. Count up by the other number and write down the answer

Part 1

Use the chart to answer the question

1) 4 + 5 = _____

2) 8 + 6 = _____

3) 8 + 3 = _____

4) _____

5) 3 + 6 = _____

6) 2 + 5 = _____

7) 8 + 8 = _____

9) 9 + 4 = _____

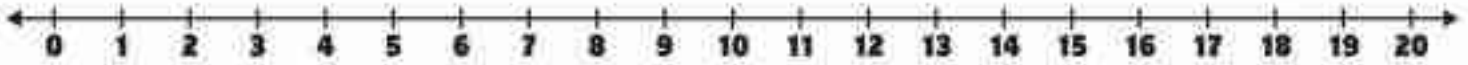
10) 9 + 9 = _____

11) 5 + 6 = _____

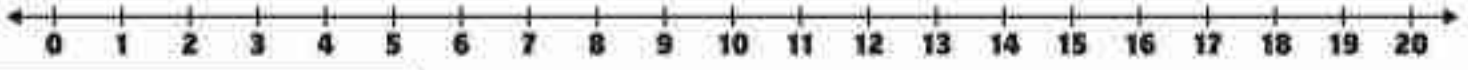
Part 2

Use the number line to find the answer

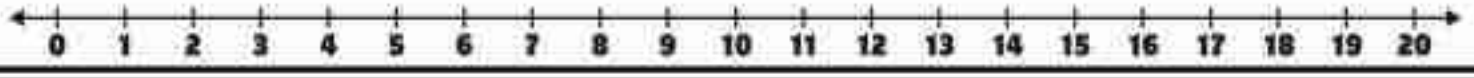
1) 3 + 9 = _____



2) 6 + 4 = _____



3) 5 + 9 = _____



Name: _____ 129

Curriculum Connection
B2.3, B2.4

Mental Math Strategy - Making Tens

Directions:
1. Create a ten by taking some from the other number.
2. Add the remaining amount.

1. 16

20 + 3 = 23

2) 19 + 6

___ + ___ = ___

3) 8 + 18

___ + ___ = ___

4) 8 + 14

___ + ___ = ___

5) + 7

___ + ___ = ___

6) 18 + 13

___ + ___ = ___

7) 28 + 13

___ + ___ = ___

8. 39 + 17

___ + ___ = ___

9. 48 + 24

___ + ___ = ___

Name: _____ 130

Curriculum Connection
B2.3, B2.4

Mental Math Strategy - Making Doubles

Directions:

1. Decide which number you will double and add those numbers together.
2. Subtract or add the remaining amount

*** if you added to the original number, subtract at the end. If you subtracted from the original number, then add at the end.

9 + 10 10 + [illegible] 20 [illegible]	**5 + 6** 5 + 5 10 + 1 = 11	**3 + 4**
4 + 5	**[illegible]**	**11 + 10**
20 + 21	**15 + 16**	**[illegible]**
29 + 30	**31 + 30**	**50 + 51**

Name: _____ 132

Curriculum Connection
B2.3, B2.4, B2.5

Mental Math - Break Into Place Value

Directions:

1. Solve each digit by writing out its place value and adding it to the other number's same place value (hundreds + hundreds, tens + tens, ones + ones)
2. Add together your totals

15 + 13

10 + 10 = 20

+ 3 = 8

20 +

13 + 12

14

22 + 23

24 + 13

6 +

45 + 41

52 + 44

Name: _____ 133

Curriculum Connection
B2.3, B2.4, B2.5

Mental Math - Break Into Place Value

Directions:

1. Solve each digit by writing out its place value and adding it to the other number's same place value (hundreds + hundreds, tens + tens, ones + ones)
2. Add together your totals

135 + 219

+ 200 = 300

10 = 40

4

300 54

124 + 56

146 +

216 + 188

168 + 254

2 +

167 + 173

355 + 262

Name: _____ 134

Curriculum Connection
B2.3, B2.4, B2.5

Mental Math - Adding in Chunks

Directions:

1. Keep the bigger number the same
2. Add "chunks" of the smaller number to the bigger number
3. The chunks need to add up to the smaller number

24 + 25

25 + 20 = 45

45 + 4 = 49

34 + 15

43

64 + 28

34 + 58

62 +

57 + 53

64 + 67

Name: _____ 136

Curriculum Connection
B2.3, B2.4, B2.5

Estimation - Compatible Numbers

Compatible Numbers is an estimation strategy we use to make adding, subtracting, multiplying, and dividing easier. It involves changing the numbers to make them easier to work with.

Examples 1) 28 + 67 could be 30 + 70 2) 382 + 112 could be 400 + 100

Questions Use compatible numbers to make the addition questions easier

	Original Question	Compatible Numbers
1		_____ + _____ = _____
2	8 55	_____ + _____ = _____
3	195 + 94	_____ + _____ = _____
4	247 + 153	_____ + _____ = _____
5	311 + 292	_____ + _____ = _____
6	361 + 248	_____ + _____ = _____
7	394 + 344	_____ + _____ = _____
8	414 + 396	_____ + _____ = _____
9	462 + 444	_____ + _____ = _____
10	489 + 509	_____ + _____ = _____

Name: _____ 137

Curriculum Connection
B2.3, B2.4, B2.5

Estimation - Clustering

Clustering is an estimation strategy we use to make adding, subtracting, multiplying, and dividing easier. It involves changing numbers around one particular number.
Example: 42, 47, 56, 55 cluster around 50, so the estimate is 50 + 50 + 50 + 50

Questions Change the numbers to one particular number that they cluster around

	Question	Compatible Numbers
1	25 [illegible]	_____ + _____ + _____ + _____ = _____
2	52 + 47 [illegible] 9 + [illegible]	_____ + _____ + _____ + _____ = _____
3	78 + 72 + 70	_____ + _____ + _____ = _____
4	103 + 101 + 97 + 93	_____ + _____ + _____ + _____ = _____
5	144 + 156 + 159	_____ + _____ + _____ = _____
6	27 + 23 + 26 + 24	_____ + _____ + _____ + _____ = _____
7	293 + 304 + 298	_____ + _____ + _____ = _____
8	248 + 253 + 246	_____ + _____ + _____ = _____
9	198 + 201 + 203	_____ + _____ + _____ = _____
10	202 + 205 + 192 + 193	_____ + _____ + _____ + _____ = _____

Name: _____ 138

Curriculum Connection
B2.3, B2.4, B2.5

Addition - Exact or Estimation?

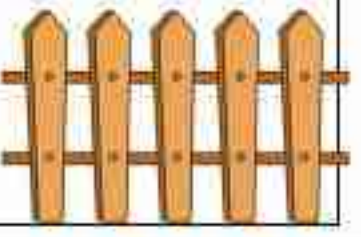
When we need to add numbers, we sometimes need an exact answer. When we don't need an exact answer, we can estimate to make our adding easier.

Questions Decide if you will find the exact answer or estimate

1) A friend asks you if you scored many points in the tournament last weekend. You scored 21, 18, 22, 17, and 23 points in the 5 games you played. Will you estimate your point total or add them all up exactly? Do the math below.

2) You have $300 in your account and want to buy shoes for $115, a sweater for $65, pants for $75 and socks for $25. Will you add them up exactly or estimate? Do the math below.

3) Brian is building a large U-shaped fence out of wood. He counts that he needs 144 boards for the left side of the fence and 189 boards for the right side. The back side will need 212 boards. Should he add them up exactly or estimate? Do the math below.



Name: _____ 140

Curriculum Correlation
02.A, 02.S

Adding - No Regrouping

Questions Use the standard algorithm to solve the addition problems below

52 + 11	23 + 14	42 + 17	12 + 33	55 + 40
+ 21	23	76 + 23	55 + 22	32 + 31
66 + 23	42 + 16	136 + 15	43	382 + 115
312 + 161	516 + 360	872 + 121	452 + 317	614 + 362
915 + 44	774 + 224	236 + 440	662 + 335	733 + 40

Name: _____ 141

Curriculum Connection
B2.4, B2.5

Addition Word Problems - No Regrouping

Questions | Solve the problems below

1) William walked 403 steps last hour and 245 steps this hour. How many steps did he walk in the last two hours?

2) Spencer h… b… account. He won $247 in a raffle. How much does he have now?

3) Rob loves to drink juice. Today he drank 5… of … d 358mL of apple juice. How much total juice did Rob drink?

4) Sofia knitted a blanket with 452cm of blue yarn and 514cm of purple yarn. How many centimetres of total yarn did Sofia use to make the blanket?

Name: _____ 142

Curriculum Connection
B2.4, B2.5

Regrouping - Which is Equal?

Questions Which is equal to the picture? There may be more than one answer!

a) 1 ten

b) 1 ten, 2

c) 12

a) 2 tens, 3 ones

b) 3 tens, 3 ones

c) 2 tens, 13 ones

a) 2 hundreds, 10 tens

b) 3 hundreds

c) 12 tens

a) 20 ones

b) 1 ten, 10 ones

c) 20 tens

ten

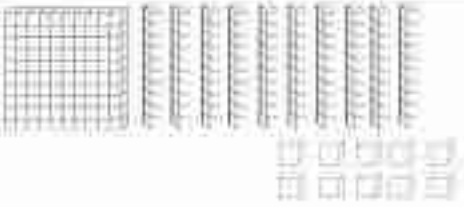
b) 2 hun 1 tens

c) 3 hundreds

a) 12 tens

b) 20 ones

ens



a) 1 hundred, 11 tens

b) 2 hundreds, 11 tens

c) 30 tens

a) 9 tens, 10 ones

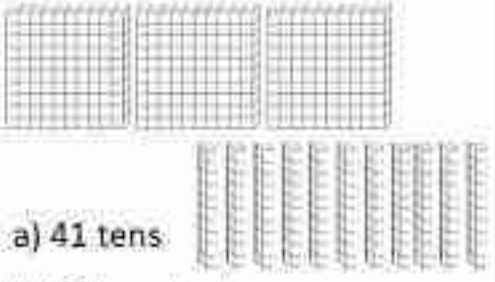
b) 1 hundred

c) 10 tens

a) 14 tens

b) 1 ten, 4 ones

c) 14 ones



a) 41 tens

b) 41 hundreds

c) 4 hundreds, 1 ten

a) 10 tens

b) 1 hundred, 1 tens

c) 11 tens

a) 20 tens

b) 1 hundred, 11 tens

c) 210 ones

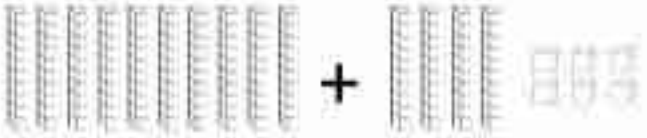
Name: _____ 143

Curriculum Correlation
B2.4, B2.5

Adding Base Ten Blocks - Regrouping

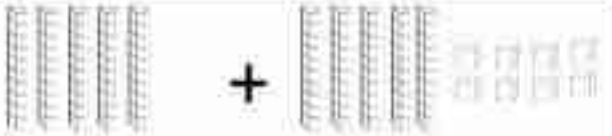
Questions Add up the base ten blocks

9 8 = 37

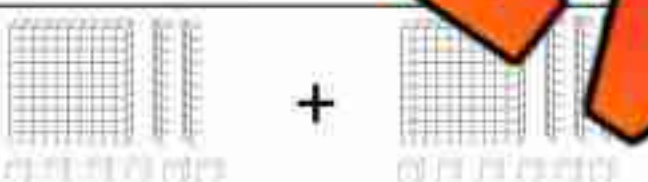


_____ + _____ = _____

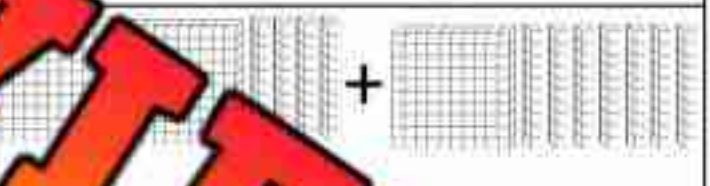
_____ + _____ = _____



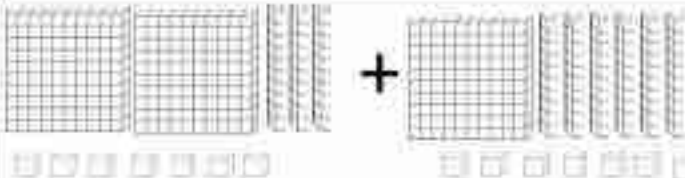
_____ + _____ = _____



_____ + _____ = _____

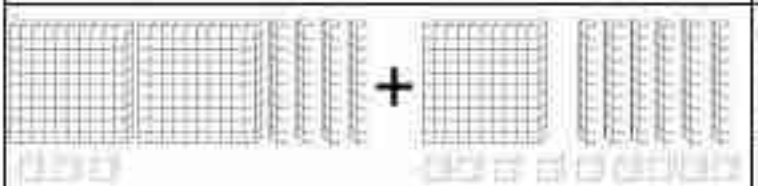


_____ + _____ = _____

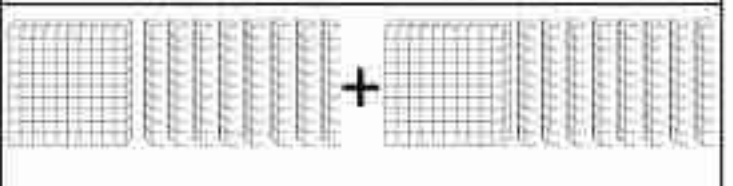


_____ + _____ = _____

_____ + _____ = _____



_____ + _____ = _____



_____ + _____ = _____

Name: _____ 145

Curriculum Connection
B2.4, B2.5

Adding - Regrouping

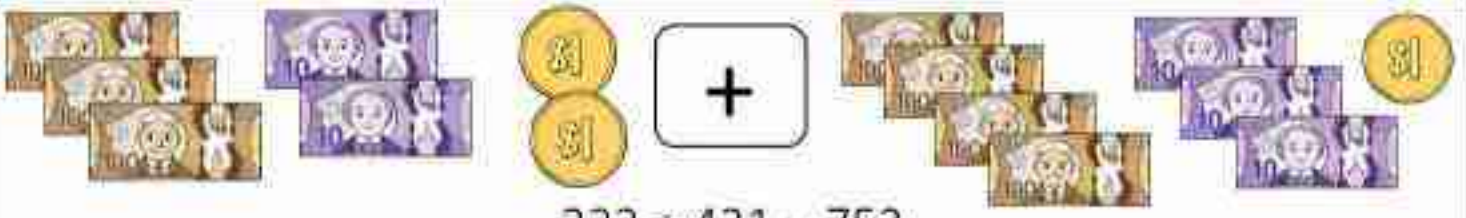
Questions Use the standard algorithm to solve the addition problems below

16 + 15	25 + 35	43 + 48	56 + 27
35 + 42	+	66 + 29	37 + 36
55 + 62	63 + 65	3	97 + 25
129 + 162	235 + 355	446 + 325	3 + 356
473 + 152	268 + 365	458 + 355	578 + 339

Name: _____ 146

Curriculum Connection
B2.4, B2.5

Adding Money

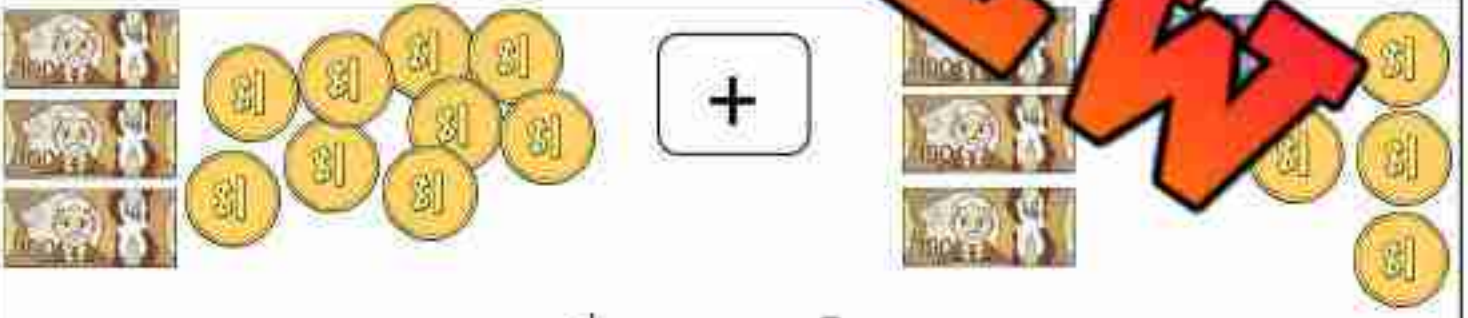


322 + 431 = 753

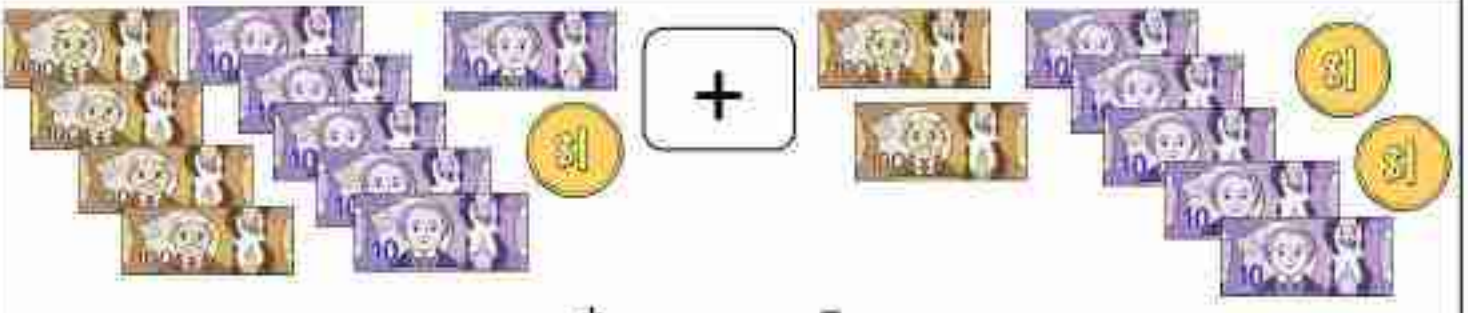
Questions Count the money below and decide which amount is larger

_____ = _____

_____ + _____



_____ + _____ = _____



_____ + _____ = _____

Name: _____ 147

Curriculum Connection
B2.4, B2.5

Addition Word Problems - Regrouping

Questions | Solve the problems below

1) Isaac donated $468 last year to charity. This year, he has donated $429. How much has Isaac donated in the last two years?

2) A delivery t... ov...8km last week. This week, the driver has driven 371km. How fa... driver... nce last week?

3) Charlotte ate two cookies today. Each cook... 18... low many grams of cookies did she eat?

4) Ken ran 354m this morning according to his GPS. He ran 568m after school today. How many total metres did Ken run today?

Name: _____ 148

Curriculum Connection
B2.4, B2.5

Addition Questions

Questions Solve the problems below

1) 758 + 142	2) 348 + 457
3) 634 + 248	4) 462 + 425
5) 348 + 364	6) [illegible]
7) 482 + 510	8) 358 + 576

Name: _____ 155

Curriculum Correlation
B2.4, B2.5

Bullseye Math Facts

Questions Fill in the outer layer of the bullseye

Name: _____ 157

Curriculum Correlation
[illegible]

Estimate and Subtract

Part 1 Round these numbers to the nearest ten. Then subtract the numbers

32 → 30 - 9 → - 10 20	42 → _____ - 21 → - _____
- 18 → - _____	68 → _____ - 22 → - _____

Part 2 Round these numbers to the nearest hundred. Then subtract the numbers

163 → 100 -113 → - 200 300	[illegible] → _____ [illegible] → - _____
798 → _____ - 308 → - _____	553 → _____ - 292 → - _____

Part 3 Estimate the numbers to determine approximately how much is left

Steve makes $310 this week at work. He buy a new guitar for $105. About how much money does Steve have now?

Name: _____ 158

Curriculum Connection
B2.3, B2.4

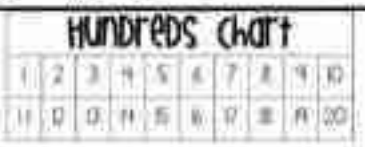
Mental Math - Counting Back (Up To 20)

Directions:
1. Circle the higher number on the hundreds chart/number line.
2. Count back by the other number and write down the answer

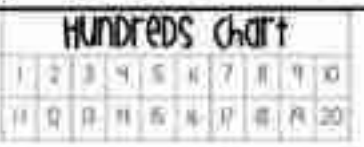
Part 1 — Use the charts to answer the questions

1) 13 - 5 = _____

2) 18 - 6 = _____

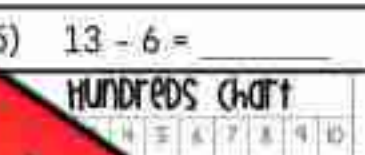


3) 15 - 3 = _____

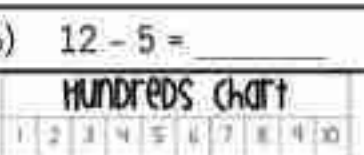


4) [illegible] = _____

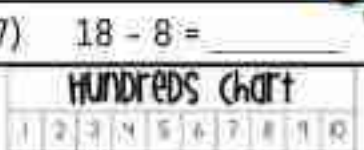
5) 13 - 6 = _____



6) 12 - 5 = _____



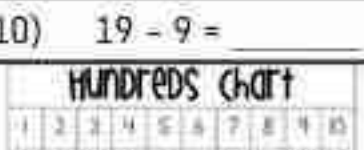
7) 18 - 8 = _____



17 [illegible] _____

9) 19 - 4 = _____

10) 19 - 9 = _____

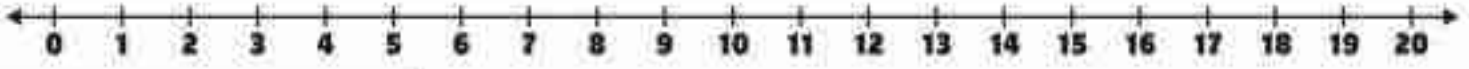


11) 15 - 6 = [illegible]

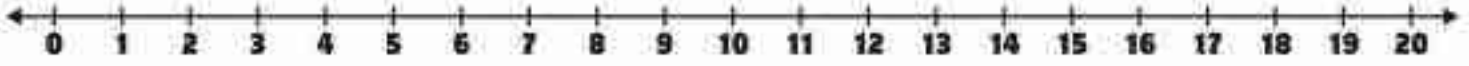
[illegible] - 8 = _____

Part 2 — Use the number lines to find the answers

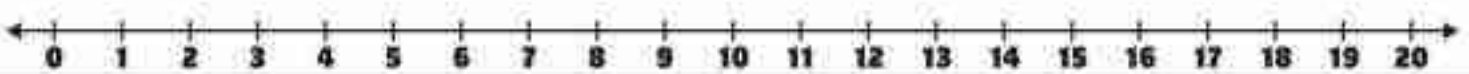
1) 13 - 9 = _____



2) 16 - 4 = _____



3) 15 - 9 = _____



Name: _____ 159

Curriculum Connection
B2.3, B2.4

Subtraction Mental Math - Counting Back

Directions:
1. Circle the higher number on the hundreds chart/number line.
2. Count back by the other number and write down the answer

18 - 5 = _____

22 - 4 = _____

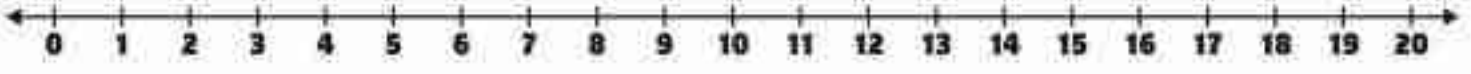
27 - 7 = _____

43 - 9 = _____

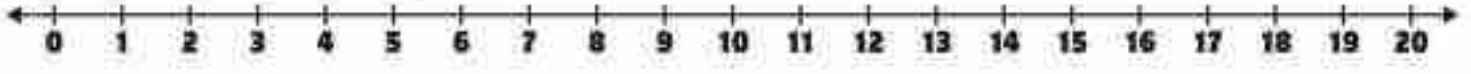
72 - _____

93 - 6 = _____

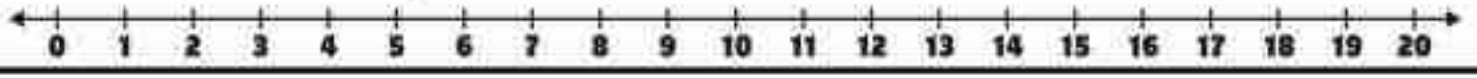
17 - 6 = _____



15 - 4 = _____



20 - 8 = _____



Name: _____ 160

Curriculum Connection
B2.3, B2.4

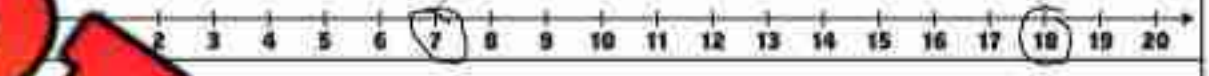
Subtraction Mental Math - Counting Up

Background – Subtraction is simply finding the difference between two numbers

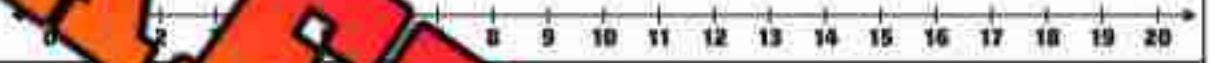
Directions

1. Start with the lower number on the number line
2. Count up to the other number and circle where you land
3. The difference is how many times you counted up

18 – 7 = 11

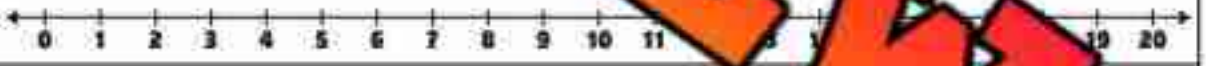


10 – 7 = _____

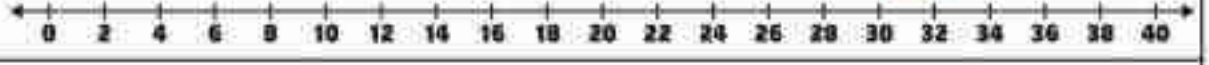


15 – 12 = _____

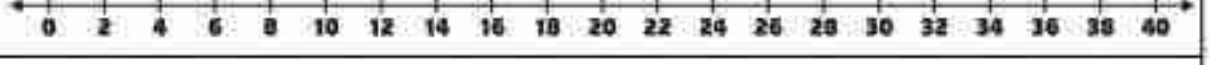
14 – 10 = _____



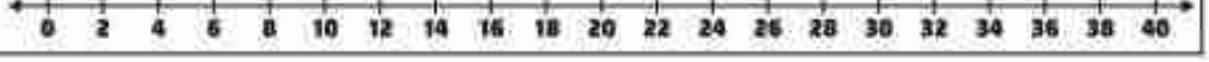
26 – 20 = _____



32 – 24 = _____



38 – 32 = _____



Name: _____ 161

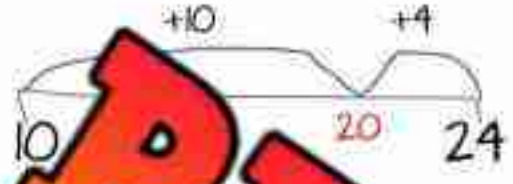
Curriculum Connection
B2.3, B2.4

Subtraction Mental Math - Counting Up

Directions:

1. Start with the smaller number
2. Count up from the smaller number to the bigger number to find the difference
3. The difference is the answer

24 – 10



Answer = 14

27 - 15

38 - 26

49 - 31

56 -

68 - 55

87 - 73

Name: _____ 163

Curriculum Connection
B2.3, B2.4, B2.5

Mental Math Strategy - Subtracting in Chunks

Directions:

1. Keep the bigger number the same
2. Subtract "chunks" of the smaller number from the bigger number
3. The chunks need to add up to the smaller number

64 - 15

64 – 10 = 54

– 5 = 49

56 - 45

43

64 - 42

57 - 34

42

53 - 23

73 - 52

Name: _____ 164

Curriculum Connection
B2.3, B2.4, B2.5

Mental Math Strategy - Subtracting in Chunks

Directions:
1. Keep the bigger number the same
2. Subtract "chunks" of the smaller number from the bigger number
3. The chunks need to add up to the smaller number

124 - 115

124 - 100 = 24
24 - 10 = 14
- 5 = 9

256 - 145

264 - 142

357 - 234

753 - 323

873 - 562

Name: _____ 167

Curriculum Correlation
B2.4, B2.5

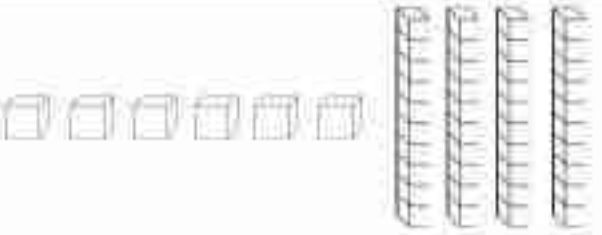
Subtracting Using Base Ten Blocks

Questions Subtract from the base ten blocks

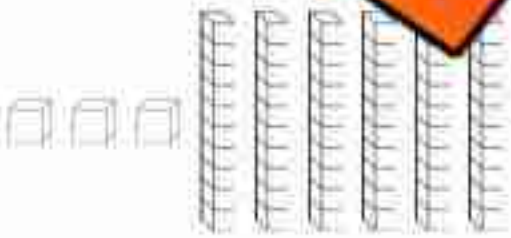
21 - 2 = _____

53 - 12 = _____

35 - 15 = _____

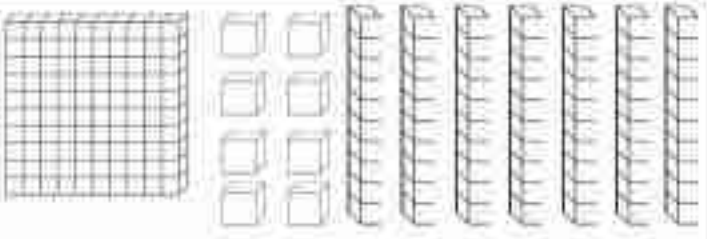


46 - 12 = _____

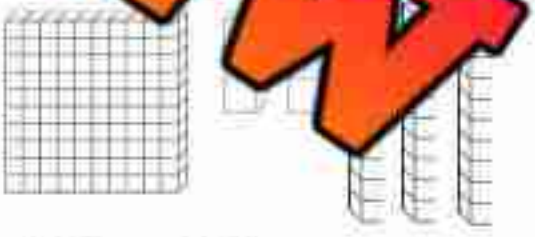


63 - 11 = _____

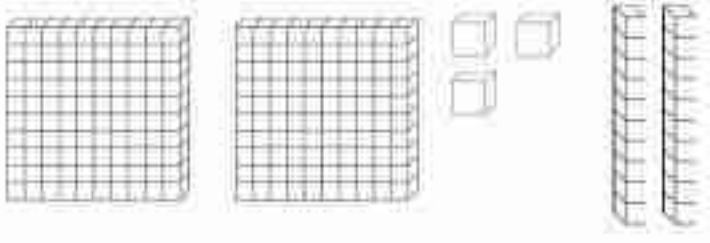
12 = _____



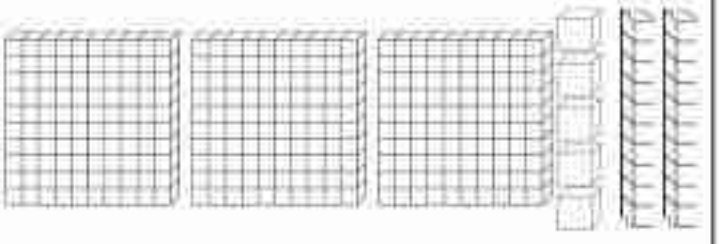
178 - 110 = _____



134 - 120 = _____



223 - 103 = _____



325 - 215 = _____

Name: _____ 168

Curriculum Connection
B2.4, B2.5

Subtraction - Borrowing

Questions Use the standard algorithm to solve the subtraction problems below

1)	Tens	Ones
	4	4
-		

2)	Tens	Ones
	4	1
-	1	4

3)	Tens	Ones
	5	5
-	2	6

4)	Tens	Ones
	7	6
-	3	8

5)	Hun.	Tens	Ones
	6	8	3
-	1	5	6

	Hun.	Tens	Ones
		5	6
-		2	2

7)	Hun.	Tens	Ones
	4	4	2
-		3	5

8)	Hun.	Tens	Ones
	4	4	5
-	2	6	7

9)	Hun.	Tens	Ones
	7	4	9
-	3	8	9

10)	Hun.	Tens	Ones
	9	3	4
-	7	6	9

Name: _____ 169

Curriculum Connection
B2.4, B2.5

Subtraction - Borrowing

Questions Use the standard algorithm to solve the subtraction problems below

1) 26 - 17	2) 35 - 17	3) 43 - 28	4) 51 - 18
5) [illegible] - 45	6) 65 - [illegible]	7) 86 - 19	8) 37 - 28
9) 51 - 48	10) 93 - 65	[illegible] 39	12) 87 - 18
13) 125 - 116	14) 456 - 348	15) 346 - 318	[illegible]65 - 356
17) 433 - 156	18) 244 - 165	19) 458 - 355	20) 338 - 159

Name: _____ 170

Curriculum Connection
B2.4, B2.5

Subtracting Money

Questions Subtract from the money below

$4[illegible]2 = $21

$53 - $11 = _____

$66 - $24 = _____

$82 - $51 = _____

$113 - $12 = _____

$1[illegible]2 = _____

$223 - $113 = _____

$317 - $304 = _____

$413 - $312 = _____

$403 - $400 = _____

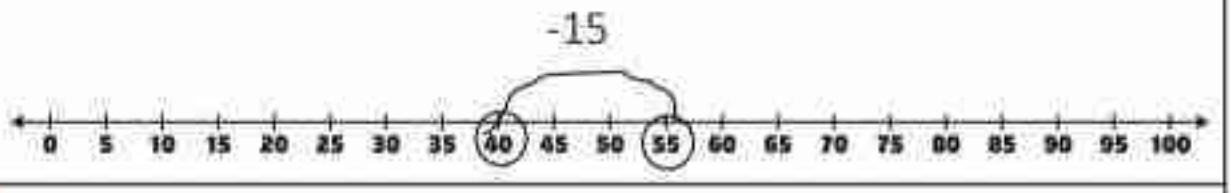
Name: _____ 171

Curriculum Connection
B2.4, B2.5

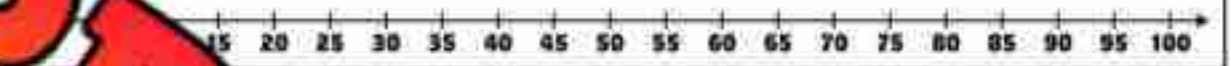
Number Line Subtraction

Questions Use the number line to subtract the numbers below

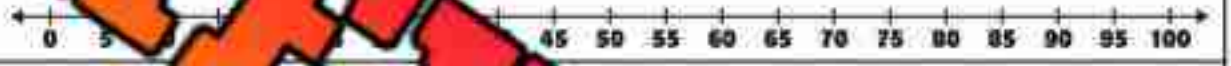
55 - 15 = 40



60 - 10 = ____

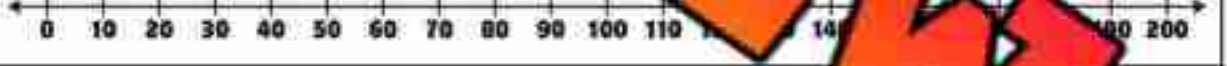


70 - 30 = ____

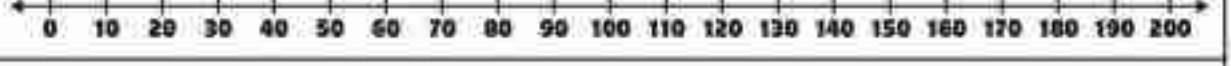


50 - 35 = ____

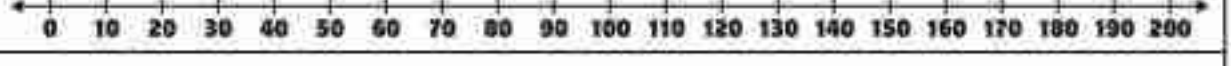
100 - 20 = ____



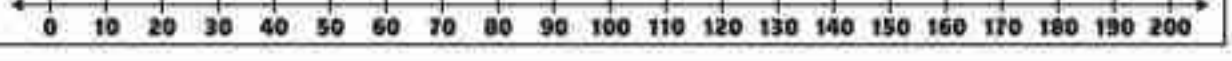
125 - 25 = ____



145 - 55 = ____



160 - 45 = ____



Name: _____ 179

Curriculum Connection
B2.4, B2.5

Bullseye Subtraction Facts

Questions

Fill in the outer layer of the bullseye

Name: _____ 180

Curriculum Connection
B2.3, B2.4, B2.5

Estimation - Compatible Numbers

Compatible Numbers is an estimation strategy we use to make adding, subtracting, multiplying, and dividing easier. It involves changing the numbers to make them easier to work with.

Examples 1) 78 - 47 could be 80 - 50 2) 382 - 112 could be 400 - 100

Questions Use compatible numbers to make the subtraction questions easier

	Original Question	Compatible Numbers
1	[illegible]	_____ - _____ = _____
2	[illegible]	_____ - _____ = _____
3	212 – 97	_____ - _____ = _____
4	256 – 147	_____ - _____ = _____
5	304 – 244	_____ - _____ = _____
6	357 – 248	_____ - _____ = _____
7	404 – 254	_____ - _____ = _____
8	611 – 396	_____ - _____ = _____
9	756 – 451	_____ - _____ = _____
10	889 – 509	_____ - _____ = _____

Name: _____ 181

Curriculum Connection
823

Adding/Subtracting - Inverse Operations

Questions

Create 2 addition and 2 subtraction equations using the numbers provided. The first one is done for you.

1) 2, 6, 4

Equation 1 (+): 2 + 4 = 6

Equation 2 (+): 4 + 2 = 6

Equation 3 (-): 6 - 2 = 4

Equation 4 (-): 6 - 4 = 2

2) 3, 5, 8

Equation 1 (+): _____

Equation 2 (+): _____

Equation 3 (-): _____

Equation 4 (-): _____

3) 6, 10, 4

Equation 1 (+): _____

Equation 2 (+): _____

Equation 3 (-): _____

Equation 4 (-): _____

13, 7, 6

Equation 1 (+): _____

Equation 2 (+): _____

Equation 3 (-): _____

Equation 4 (-): _____

5) 15, 20, 5

Equation 1 (+): _____

Equation 2 (+): _____

Equation 3 (-): _____

Equation 4 (-): _____

6) 11, 20, 9

Equation 1 (+): _____

Equation 2 (+): _____

Equation 3 (-): _____

Equation 4 (-): _____

Name: _____ 184

Curriculum Connection
2.2.1

Inverse Operations - Checking Answers

Questions

Check your answer by using the inverse operation

1) 5 + 2 = 7 → 7 - 2 = 5

2) 9 + 3 = ____ → _____ - _____ = _____

3) 4 + 5 = ____ → _____ - _____ = _____

4) 8 - 3 = 5 → 5 + 3 = 8

5) 10 - 4 = ____ → _____ = _____

6) 10 + 8 = ____ → _____ = _____

7) 13 - 4 = ____ → _____ + _____ = _____

8) 17 - 5 = ____ → _____ + _____ = _____

9) 12 + 7 = ____ → _____ - _____ = _____

10) 20 - 8 = ____ → _____ + _____ = _____

Name: _____ 185

Adding and Subtracting Quiz

Part 1 Use the standard algorithm to solve the problems below

	Hun.	Tens	Ones
	4		3
+		7	

	Hun.	Tens	Ones
	4	5	2
+	2	3	5

	Hun.	Tens	Ones
	6	2	5
+	3	5	4

	Hun.	Tens	Ones
	3	4	5
+	6	2	6

	Hun.	Tens	Ones
	5	2	
+	2	5	

	Hun.	Tens	Ones
	4	5	0
+			9

	Hun.	Tens	Ones
	6	5	4
-	5	1	3

	Hun.	Tens	Ones
	8	5	3
-	4	4	1

	Hun.	Tens	Ones
	7	6	8
-	5	0	2

	Hun.	Tens	Ones
	8	4	8
-	1	5	7

	Hun.	Tens	Ones
	4	7	3
-	1	2	6

	Hun.	Tens	Ones
	5	3	8
-	3	4	5

Part 2 Solve the following questions

1) Maso[illegible] has $[illegible] [illegible]ends $161 on new skates. How much money does he have left?

2) Steve has collected 436 hockey [illegible]. He [illegible] cards to his younger brother. How many cards does he have left?

3) Claire has 432 points in a video game. She got 139 more [illegible] reaching the next level. How many points does she have now?

4) Hudson played video games for 125 minutes on Monday, 104 minutes on Tuesday, and 138 minutes on Wednesday. How many total minutes did he play video games?

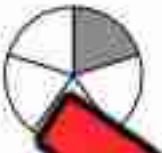
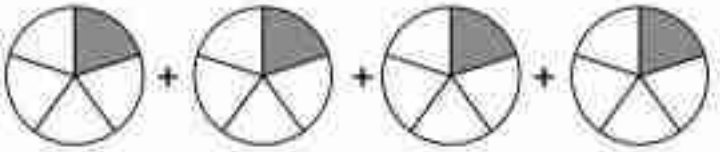
Name: _____ 189

Curriculum Connection
B2.7, B2.8

Multiplying Fractions - Repeated Addition

Questions | Divide the shapes below and write the fraction

1) Jeff bought a wheel of cheese. He cuts the cheese into 5 pieces. He eats one piece of cheese each day for 4 days. How many pieces of cheese did he eat?

4 x  = _____ or  = _____

2) Susa[illegible] pizza with 8 slices to share with 6 people. Each person had one slice.

a) W[illegible]ntence to represent the situation

b) Write an addition [illegible] situation

c) How much of the pizza was eaten?

3) Charles has one box of 12 donuts. He shared his donut[illegible] p[illegible]rson had one donut.

a) Write a multiplication sentence to represent the situation

b) Write an addition sentence to represent the situation

c) How much of the box of donuts was eaten?

Name: _____ 190

Curriculum Connection
B2.7, B2.8

Fractions and Repeated Addition

Fractions have two numbers that are important to remember. The **numerator** is the number on top and the **denominator** is the number on the bottom.

$\frac{1}{4}$ → Numerator – How many parts you have

→ Denominator – The total number of parts in the whole

The whole is cut up into 4 equal pieces. The numerator tells us how many pieces are being counted. We can add pieces to our whole by using repeated addition.

Example: $\frac{1}{4} + \frac{1}{4} + \frac{1}{4} + \frac{1}{4} = \frac{4}{4}$

Ques umerators but keep the denominator the same

1) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} = \_\_\_\_\_$

2) $\frac{2}{10} + \frac{2}{10} + \frac{2}{10} + \_ + \_ = \_\_\_\_\_$

3) $\frac{3}{12} + \frac{3}{12} + \frac{3}{12} = \_\_\_\_\_$

4) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} = \_\_\_\_\_$

5) $\frac{2}{14} + \frac{2}{14} + \frac{2}{14} + \frac{2}{14} + \frac{2}{14} = \_\_\_\_\_$

Name: _____ 191

Curriculum Connection
B2.7, B2.8

Repeated Addition & Multiplying Fractions

Part 1 Add and multiply the fractions below

Adding Fractions	Multiplying Fractions
1) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} =$ _____	$4 \times \frac{1}{6} = \frac{4}{6}$
2) $\frac{2}{10} + \frac{2}{10} + \frac{2}{10} =$ _____	$3 \times \frac{2}{10} =$ _____
3) $\frac{3}{12} + \frac{3}{12} + \frac{3}{12} + \frac{3}{12} =$ _____	$4 \times \frac{3}{12} =$ _____
4) $\frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} + \frac{1}{8} =$ _____	$\frac{1}{8} =$ _____

Part 2 Write the corresponding addition or multiplication

Adding Fractions	Multiplying Fractions
1) $\frac{2}{14} + \frac{2}{14} + \frac{2}{14} + \frac{2}{14} =$ _____	_____ x _____ = _____
2)	$3 \times \frac{3}{12} =$ _____
3) $\frac{1}{6} + \frac{1}{6} + \frac{1}{6} + \frac{1}{6} =$ _____	_____ x _____ = _____

Name: _____ 196

Curriculum Connection
B2.7, B2.8

Same Numerator/Different Denominator

If fractions have the same numerator, they have the same number of equal parts. If the denominator is different, the fractions have a different number of total parts. Check out the pizzas below that have the same numerators but different denominators.

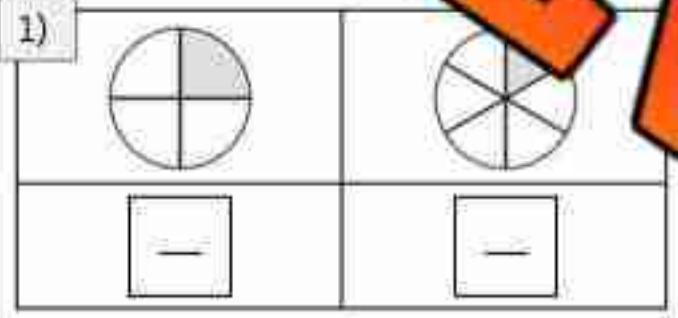
$\frac{4}{8}$ The whole pizza is cut into 8 pieces. 4 slices have been shaded in.

$\frac{4}{6}$ The whole pizza is cut into 6 pieces. 4 slices have been shaded in.

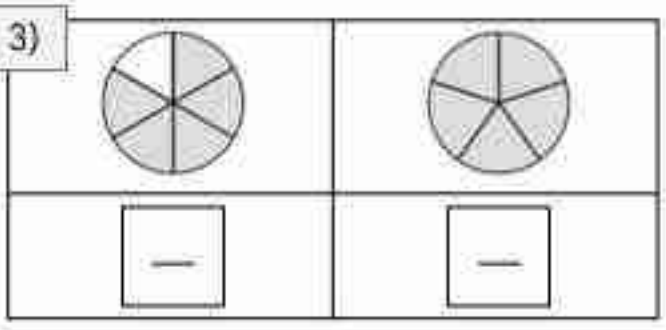
If you [illegible] ld rather have 4/6 slices of pizza, than 4/8. Therefore, 4/6 is bigge[illegible]n 4/8 [illegible]mple, the whole is the same size. This means the pizza is the same size. [illegible]ar[illegible]tions that have the same numerator.

Question W[illegible]e f[illegible]le which one is bigger

1)

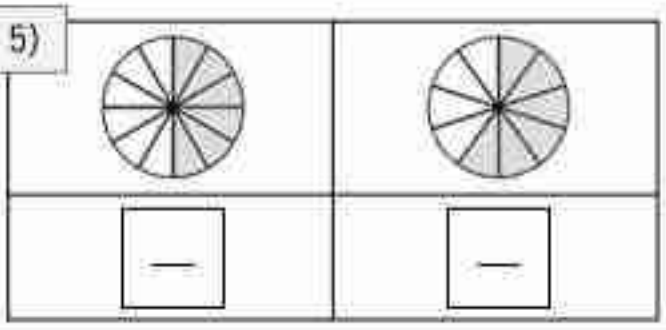


3)

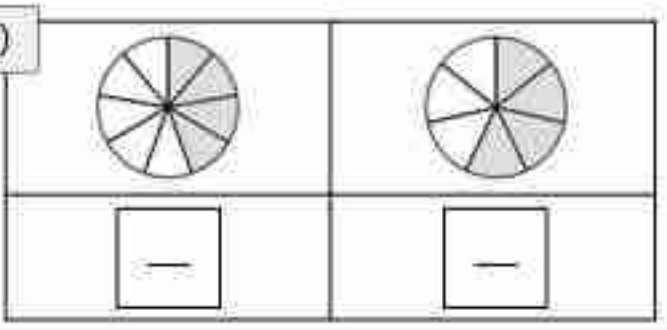


4)

5)



6)



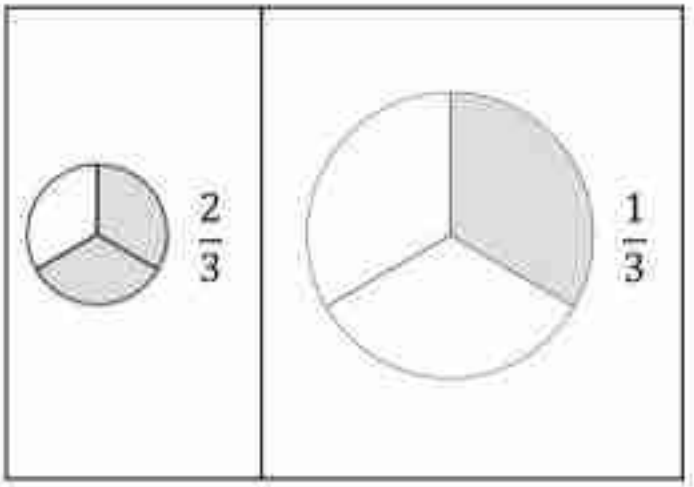
Name: _____ 198

Curriculum Connection
B2.7, B2.8

Comparing Fractions - Different Wholes

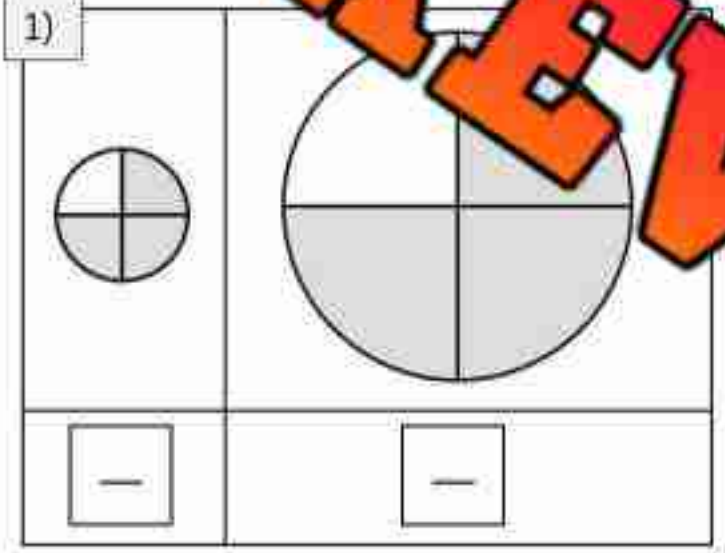
The size of the whole is important when we compare fractions. Two thirds ($\frac{2}{3}$) of a small pizza could be smaller than one third ($\frac{1}{3}$) of an extra-large pizza. Check out the example.

When the fractions are the same, but the whole is different, we can compare fractions by looking at the size

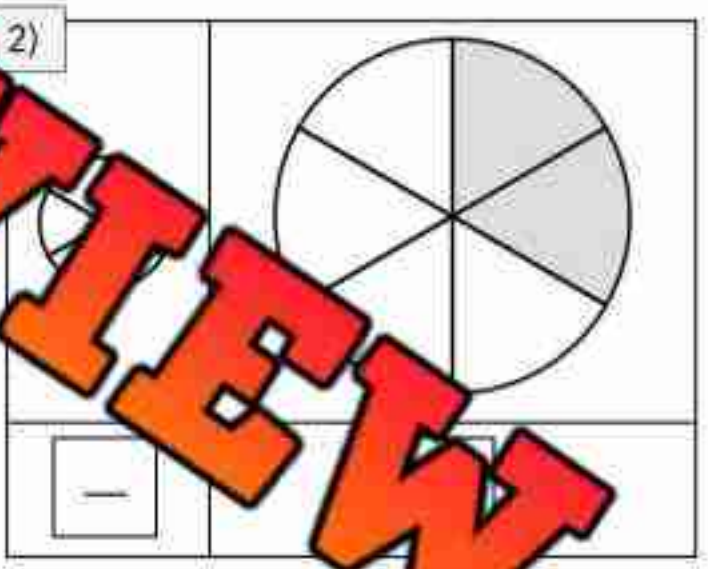


Question ac and circle which one is bigger

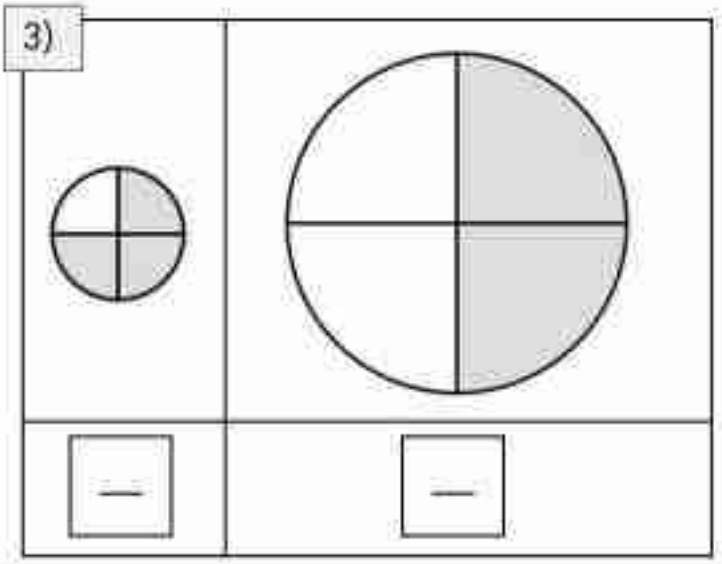
1)



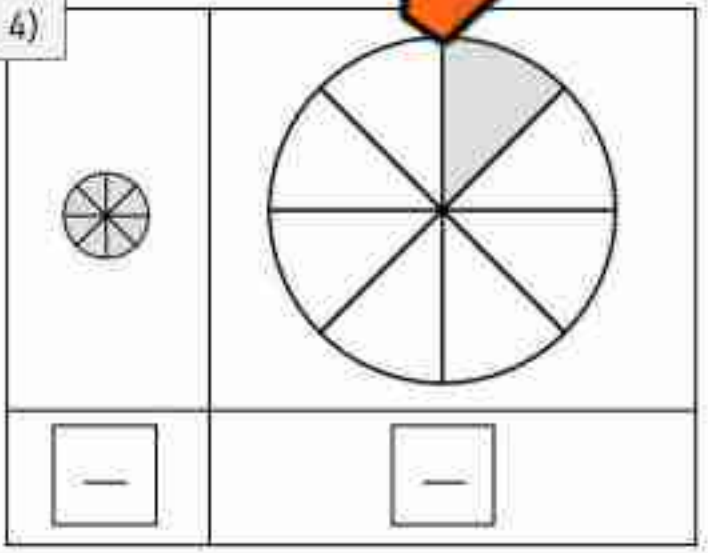
2)



3)



4)



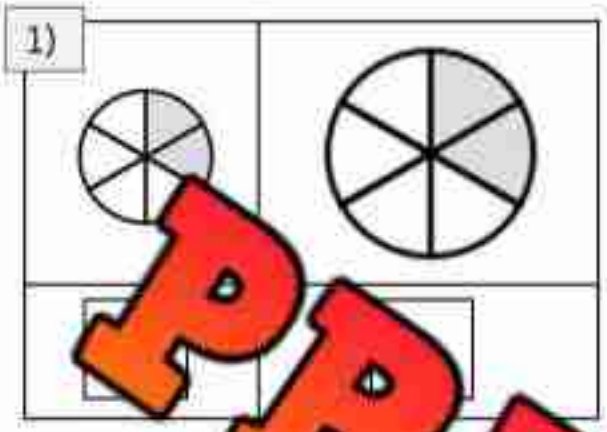
Name: _____ 199

Curriculum Connection
B2.7, B2.8

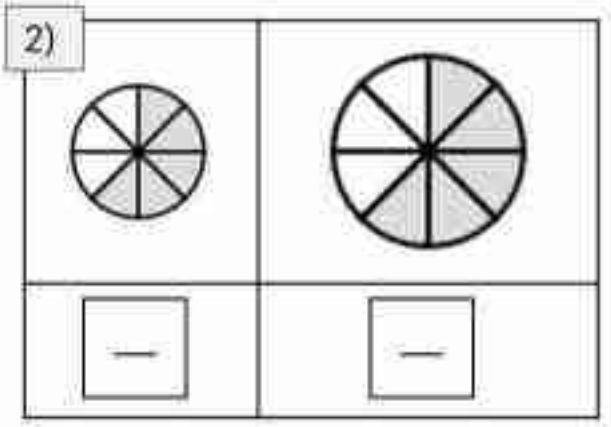
Comparing Fractions

Part 1 — Write the fraction and circle which one is bigger

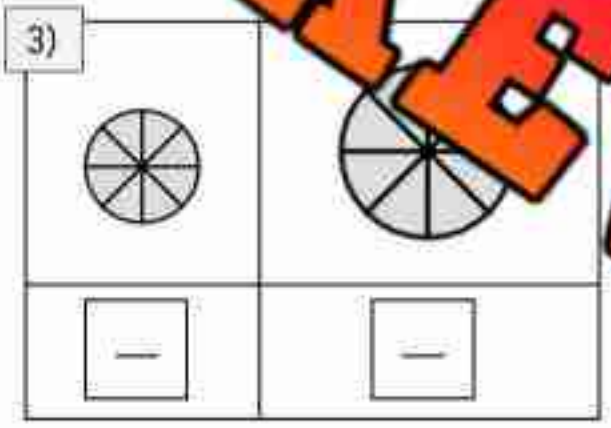
1)



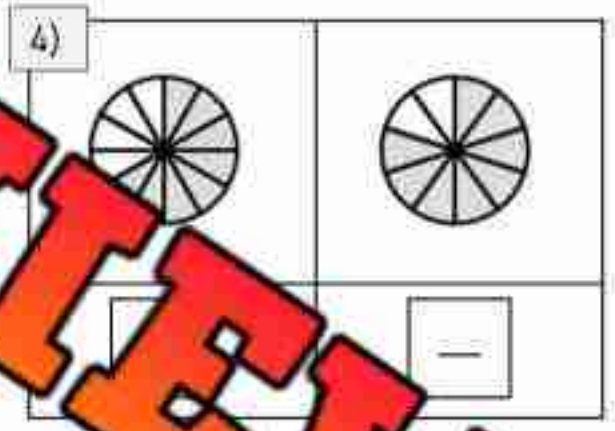
2)



3)



4)



Part 2 — Compare the fractions using < > =

1) $\frac{2}{5}$ ☐ $\frac{2}{5}$	2) $\frac{3}{6}$ ☐ $\frac{5}{6}$	3) $\frac{3}{4}$ ☐ $\frac{3}{7}$	4) $\frac{2}{10}$ ☐ $\frac{2}{12}$
5) $\frac{3}{8}$ ☐ $\frac{3}{8}$	6) $\frac{4}{9}$ ☐ $\frac{4}{5}$	7) $\frac{5}{7}$ ☐ $\frac{4}{7}$	8) $\frac{2}{8}$ ☐ $\frac{7}{8}$

Name: _____ 200

Curriculum Connection
B2.9

Ratios

A **ratio** shows the relationship between two amounts.
Example 

The ratio of apples to bananas is 1:7. For every apple you have, you have 7 bananas.

Questions Write the ratios for the questions below

The ratio of cooki[illegible]e is _____ : _____

The ratio of tomato to onion _____ : _____

The ratio of pizza to drink is _____ : _____

The ratio of burger to fries is _____ : _____

The ratio of pineapple to strawberries is _____ : _____

The ratio of bread to jam is _____ : _____

Name: _____ 202

Curriculum Connection
RP.9

Ratios Word Problems - At the Zoo

Questions ☐ Draw pictures ☐ Use a solution statement ☐ Show your thinking

1) At the zoo, the ratio of gorillas to monkeys is 1:5. There are 5 gorillas in the zoo. How many monkeys are there?

2) At the zoo, the ratio [illegible] 10. There are 20 lizards. How many snakes are there?

3) a) At the zoo, the ratio of lions to elephants has to be 1:2. There are 10 [illegible]. How many elephants are there?

b) The zoo released 3 lions back to the wild. How many elephants should they have now?

Name: _____ 203

Curriculum Connection
RS.9

Equivalent Ratios - Scaling Up and Down

A **ratio** shows the relationship between two amounts.

Example 

The ratio of cars to bikes is 2:10. There are five times as many bikes as cars. You could also say there are five times less cars than bikes. We can scale down the ratio and say the ratio of cars to bikes is 1:5. We can also scale up by saying the ratio of cars to bikes is 3:15. These are equivalent ratios.

Questions ... the ratio of the images. Then write a scaled up and down equivalent ratio

Scaled Up	Scaled Down

The ratio of skates to ... is: _____:_____.

Scaled Up	Scaled Down

The ratio of laptops to televisions is: _____:_____.

S...	...Down

The ratio of erasers to pencils is: _____:_____.

Scaled Up	Scaled Down

The ratio of juice to chips is: _____:_____.

Scaled Up	Scaled Down

The ratio of basketballs to soccer balls is: _____:_____.

Name: _____ 204

Curriculum Connection
RP.3

Equivalent Ratios - Scaling Up and Down

Questions Circle two equivalent ratios for each of the questions below

1) 1:2	2:6	4:8	4:16	1:4	5:10
2) 1:5	2:5	2:10	3:20	4:10	3:15
3) 1:10	2:5	5:10	2:20	10:50	5:100
4) 2:4	1:6	4:7	4:8	1:4	1:2
5) 10:20	5:10	5:15	5:20	10:3	20:40
6) 5:10	1:2	5:20	10:10	10:20	10:30
7) 2:10	1:10	1:5	3:20	5:10	6:30
8) 10:50	10:60	1:5	20:20	20:100	30:100

Google Slides Lessons Preview

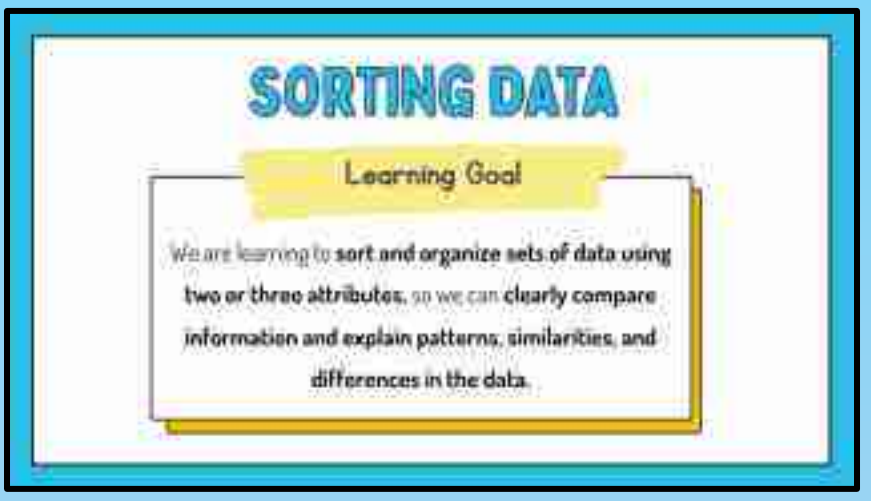
Ontario Math Curriculum

Data Literacy & Probability – Grade 3

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Quotes
- And More!



Part 2 – Action!

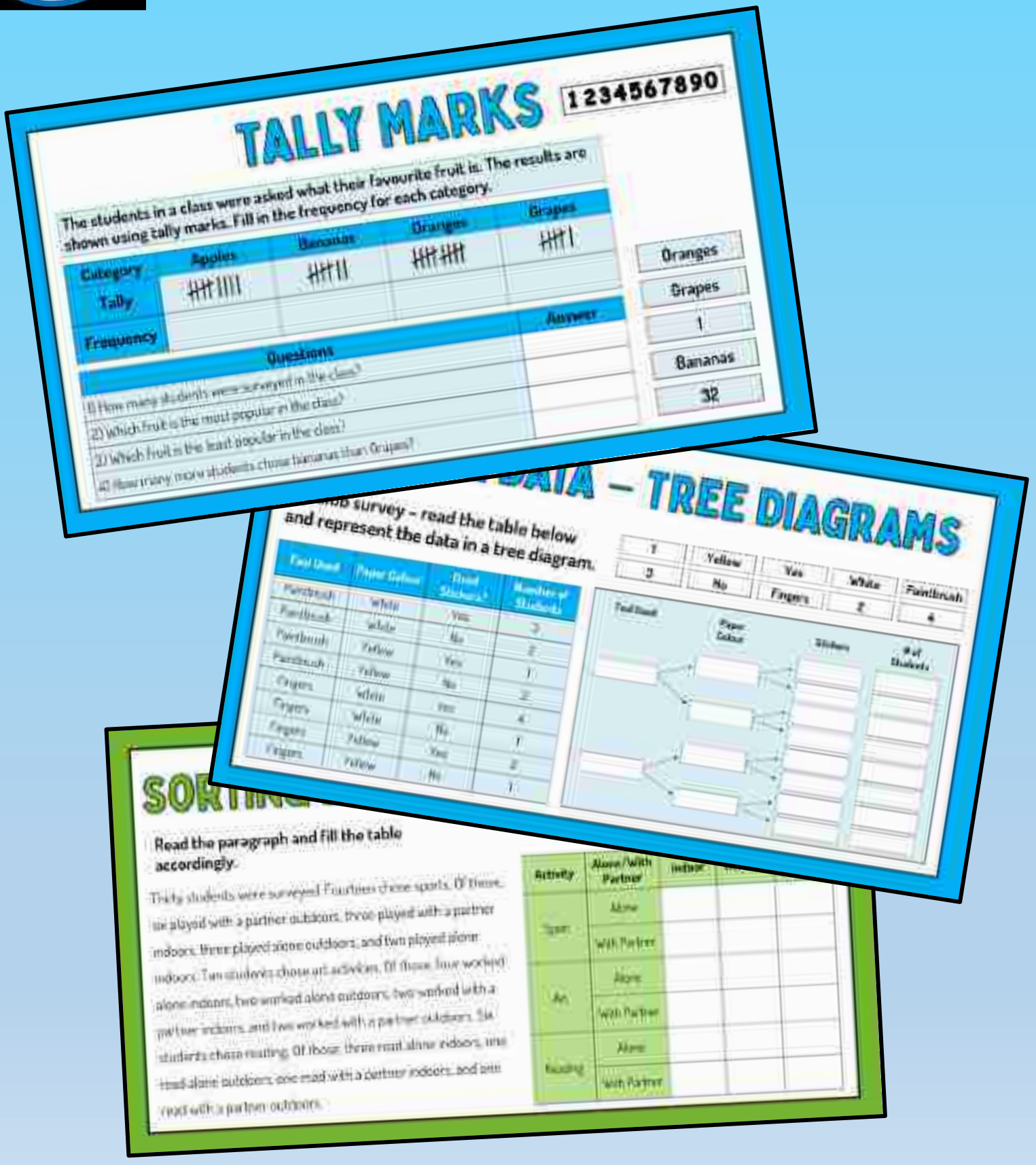
- Writing
- Matching
- Drag and Drop
- Drawing
- And More!

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

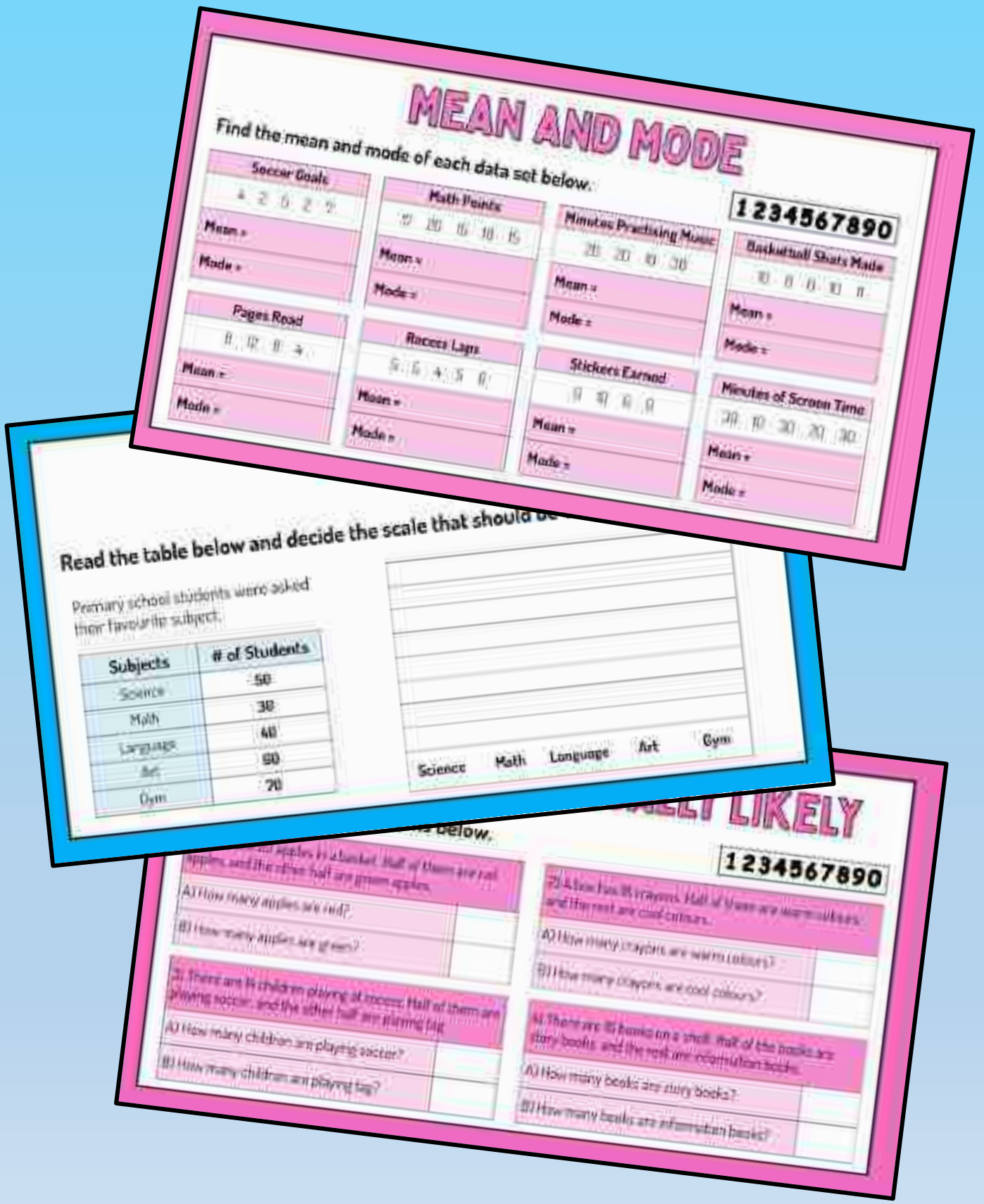
Ontario Math Curriculum

Data Literacy & Probability – Grade 3

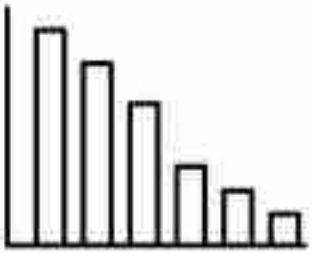


Ontario Math Curriculum

Data Literacy & Probability – Grade 3



Workbook Preview



Grade 3
D1. – Data Literacy

	Curriculum Expectations	Pages That Cover the Expectations
D1.1	sort sets of data about people or things according to two and three attributes, using tables and logic diagrams, including Venn, Carroll, and tree diagrams, as appropriate	5 – 15, 18 - 33
D1.2		50, 96
D1.3	display sets of data, using many-to-one correspondence, in pictographs and bar graphs with proper sources, titles, and labels, and appropriate scales	57 – 60, 72 – 83, 89, 91, 93, 95, 97
D1.4	determine the mean and identify the mode(s), if any, for various data sets involving whole numbers, and explain what each of these measures indicates about the data	34 – 41
D1.5	analyse different sets of data presented in various ways, including in frequency tables and in graphs with different scales, by asking and answering questions about the data and drawing conclusions, then make convincing arguments and informed decisions	51 – 56, 61 – 71, 98 – 101

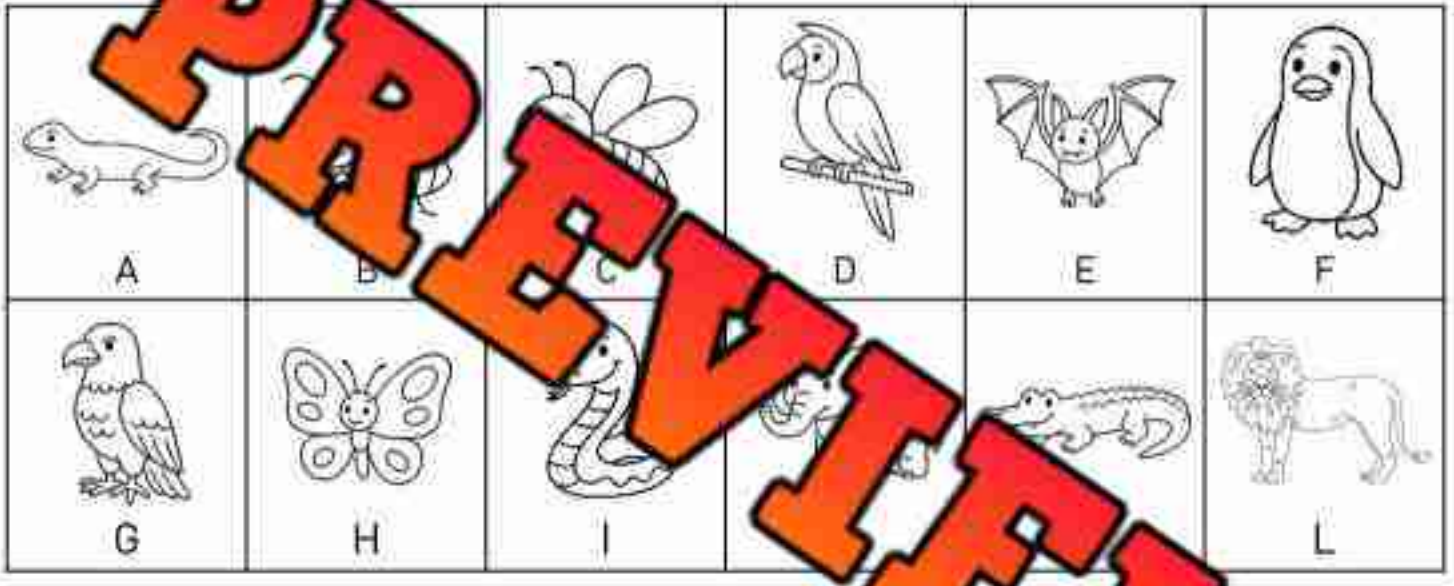
Name: _____ 5

Curriculum Connection
011

Sorting Data

Part 1 Sort the animals by writing the letter in the correct category

Mammal	Bird	Reptile	Insect



Part 2 Read the list of data and match them with the co

a) hammerhead shark, dolphin, seahorse, jellyfish	_____ ers
b) rose, tulip, daisy, lily	_____ birds
c) tiger, lion, bear, wolf	_____ wild mammals
d) robin, eagle, parrot, penguin	_____ sea animals
a) triangle, square, circle, rectangle	_____ sizes
b) one, two, three, four	_____ emotions
c) happy, sad, angry, excited	_____ numbers
d) big, small, tall, short	_____ shapes

Name: _____ 6

Curriculum Connection
011

Sorting Data

Part 1 Sort the shapes based on two attributes

A B C D E F G

Triangles (Letters)	Hearts (Letters)	Moons (Letters)	White Shapes (Letters)	Striped Shapes (Letters)
Number of Triangles	Number of Hearts	Number of Moons	Number of White Shapes	Number of Striped Shapes

Part 2 Sort the shapes based on two attributes

A B C D E I J

White Clouds (Letters)	Dark Clouds (Letters)	
Number of White Clouds	Number of Dark Clouds	Number of Patterned Clouds

1) How many clouds are both white AND have a pattern?	
2) Which group is the largest?	
3) When sorting data, can something/someone belong to two groups?	

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Sort the shapes based on two attributes

Pentagon (Letters)	Hexagon (Letters)	Smiley Face (Letters)

White Shapes (Letters)	Striped Shapes (Letters)

Name: _____

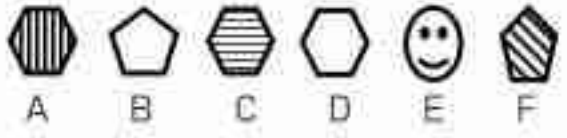
Sort the shapes based on two attributes

Pentagon (Letters)	Hexagon (Letters)	Smiley Face (Letters)

White Shapes (Letters)	Striped Shapes (Letters)

Name: _____

Sort the shapes based on two attributes



Pentagon (Letters)	Hexagon (Letters)	Smiley Face (Letters)

White Shapes (Letters)	Striped Shapes (Letters)

Name: _____

Sort the shapes based on two attributes

Pentagon (Letters)	Hexagon (Letters)	Smiley Face (Letters)

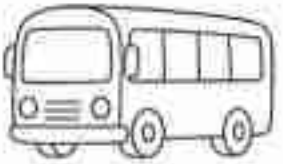
White Shapes (Letters)	Striped Shapes (Letters)

Name: _____ 8

Curriculum Connection
D1.1

Sorting Data – Carroll Diagram

Part 1 Sort the vehicles into the correct categories

			
Rocket	Boat	Bus	Airplane
			
Car	Bike	Helicopter	Skateboard

	Used On	Used In Air Or Water
Used By Many People		
Used By 1 Person		

Part 2 Give examples of animals that fit the following categories

Can you think of another vehicle that...	
1) Is used on land and carries many people?	
2) Is used on land and carries only one person?	
3) Is used in air or water and carries many people?	
4) Is used in air or water and carries only one person?	

Name: _____ 14

Curriculum Connection
011

Sorting Data – Carroll Diagram

Part 1 There are 14 clocks below that show 24-hour time. Sort them in the Carroll diagram.

	Before 12:00 (AM)	After 12:00 (PM)
Before Half Past		
After Half Past		

Part 2 Give examples of times that fit the following categories.

Can you think of another time that...	
1. Is before 12:00 and before half past the hour?	
2. Is before 12:00 and after half past the hour?	
3. Is after 12:00 and before half past the hour?	
4. Is after 12:00 and after half past the hour?	
5. Is before 07:00 in the morning?	
6. Is between 13:00 and 15:00?	

Curriculum Connection
011

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Carrol Diagram: Sort the vehicles into the correct categories.

Bicycle	Scooter	Surfboard	Train
Boat	Motorcycle	Airplane	Car

	Moves on Land	Does Not Move on Land
Needs Fuel		
No Fuel		

Name: _____

Carrol Diagram: Sort the vehicles into the correct categories.

Bicycle	Scooter	Surfboard	Train
Boat	Motorcycle	Airplane	Car

	Moves on Land	Does Not Move on Land
Needs Fuel		
No Fuel		

Name: _____

Carrol Diagram: Sort the vehicles into the correct categories.

Bicycle	Scooter	Surfboard	Train
Boat	Motorcycle	Airplane	Car

	Moves on Land	Does Not Move on Land
Needs Fuel		
No Fuel		

Name: _____ 16

Curriculum Connection
012

Tally Marks

	= 1	= 2	= 3	= 4	= 5
= 6	= 7	= 8	= 9	= 10

Part 1 Count the tally marks

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

Part 2 Draw tally marks that match the number

5 =	9 =	
14 =	19 =	23 =
34 =	42 =	

Part 3 Which is greater? Use the < > or =

12 _____	11 _____	22 _____

Name: _____ 18

Curriculum Connection
D1.1

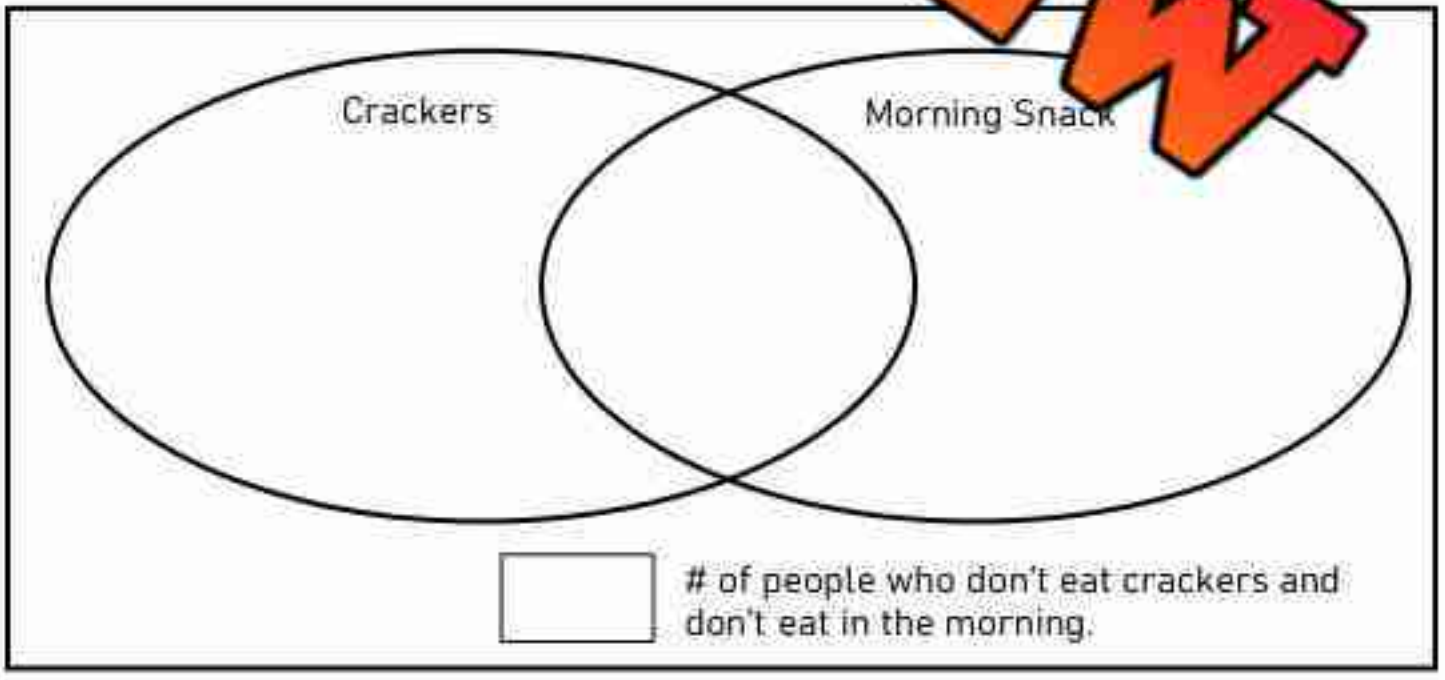
Two-Way Tables and Venn Diagrams

Snack Type	Morning Snack	Afternoon Snack
Fruit	𝍸 IIII	IIII
Crackers	𝍸	𝍸 II
Cookies	II	𝍸 I

Part 1 Fi…table below that is setup to display just two attributes from the data

	Students' Favourite Snacks by Time of Day	
Snack Type	**…ning …ck**	**Not Morning Snack (Afternoon Snack)**
Crackers		
Not Crackers (Fruit and Cookies)		

Part 2 Fill in the Venn Diagram that is setup to displ… attri…om the data



_____ # of people who don't eat crackers and don't eat in the morning.

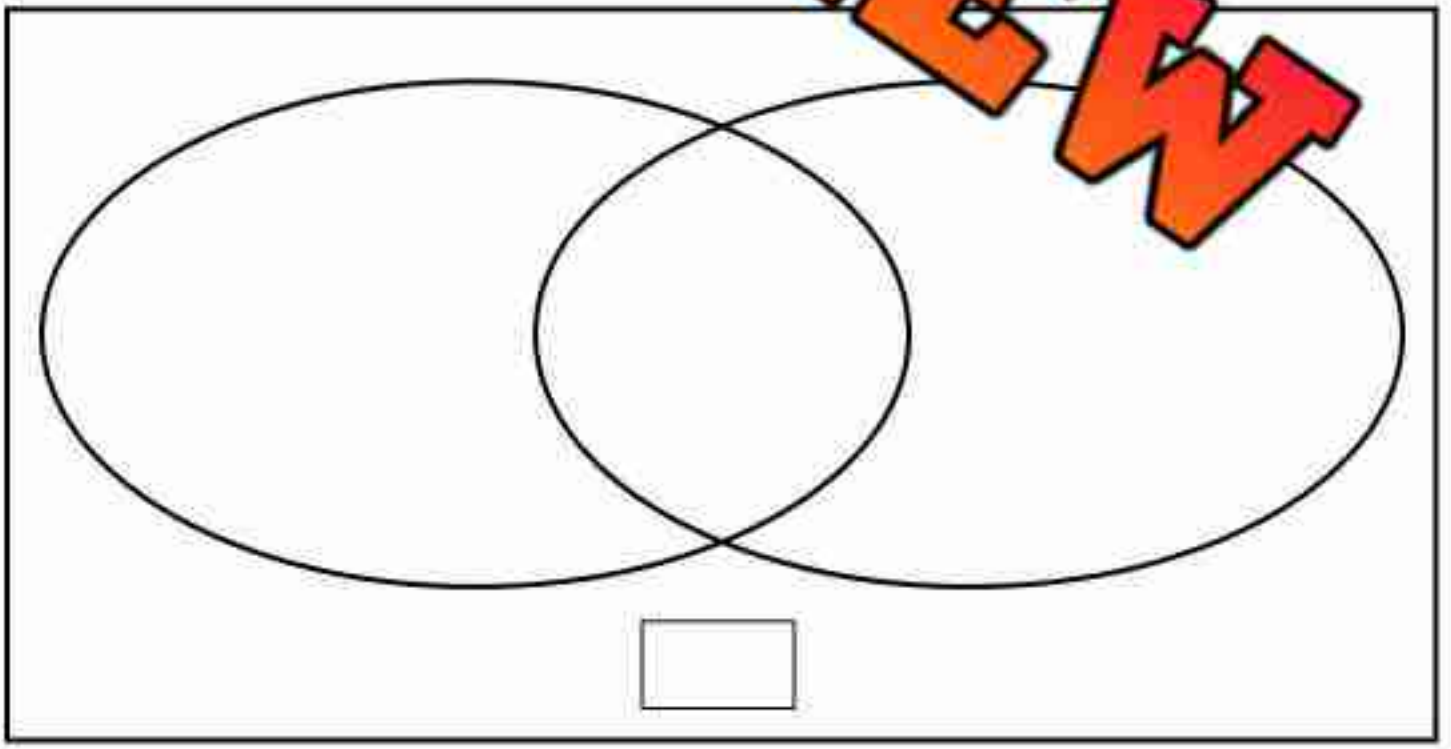
Name: _____ 19

Curriculum Connection
D1.1

Snack Type	Morning Snack	Afternoon Snack
Fruit	𝍸 IIII	IIII
Crackers	𝍸	𝍸 II
Cookies	II	𝍸 I

Part 3 Choose 2 attributes from the data and create your own Carroll Diagram.

Part 4 Choose 2 attributes from the data and create your own Venn Diagram.



Name: _____ 20

Curriculum Connection
D1.1

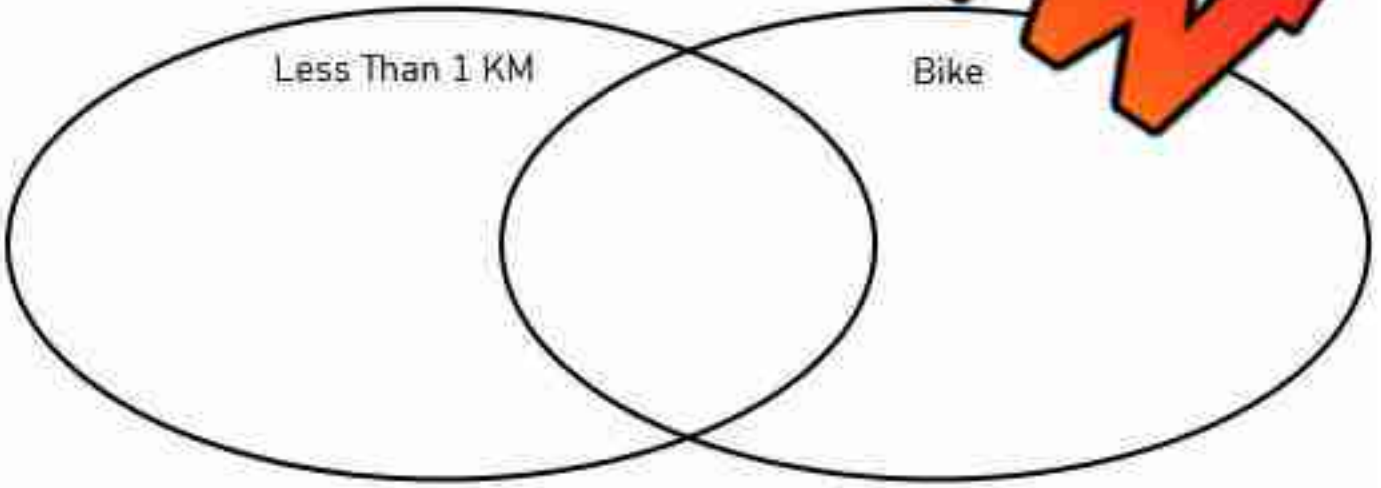
Two-Way Tables and Venn Diagrams

Transportation Method	Less than 1 km	1–5 km	Over 5 km
Walk	𝍸 𝍸 II	III	
Bike	𝍸 II	𝍸 I	I
Bus		𝍸	𝍸 𝍸
Car	III	𝍸 III	𝍸 𝍸 II

Part 1 Fill in the table below that is setup to display just two attributes from the data

	Distance	
Vehicle	**KM**	**More Than 1 KM**
Bike		
Not A Bike		

Part 2 Fill in the Venn Diagram that is setup to display two attributes from the data



[ ] # of people who travel more than 1 km and do not bike.

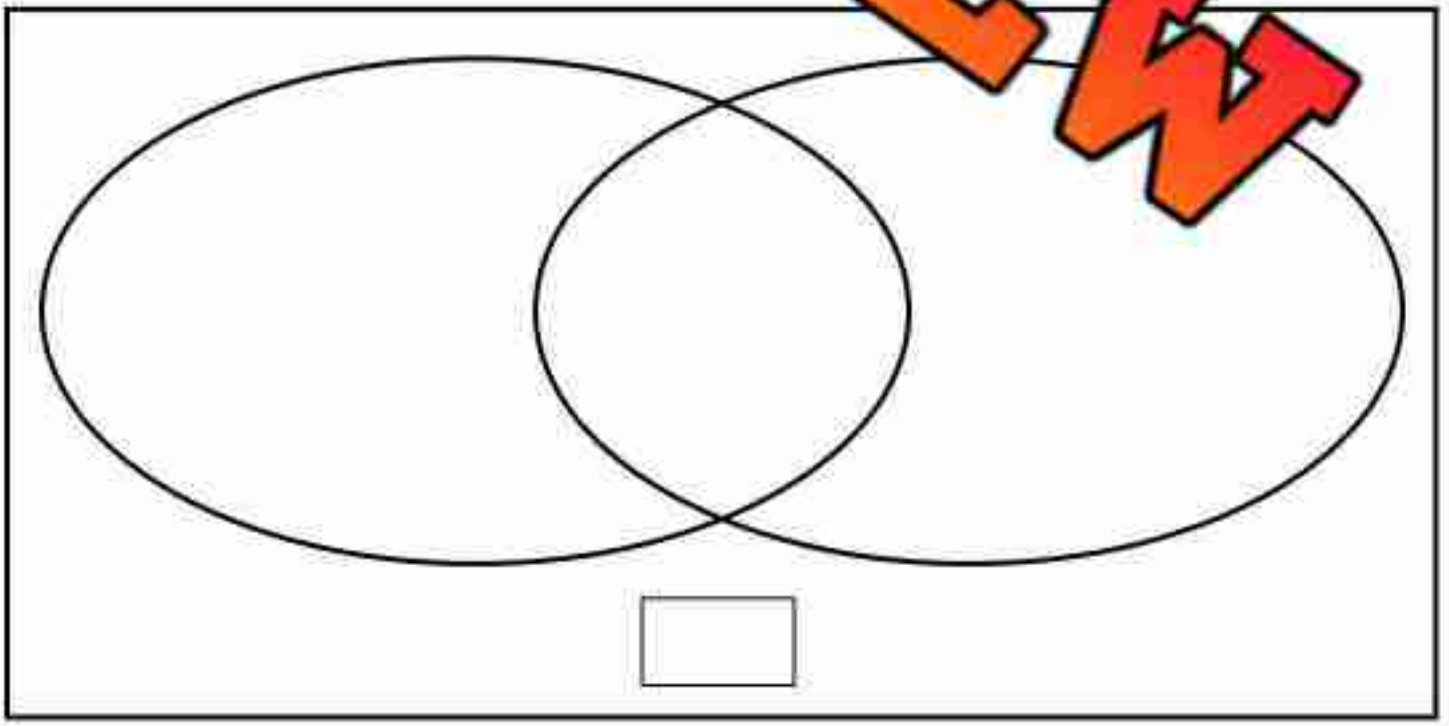
Name: _____ 21

Curriculum Connection
D1.1

Transportation Method	Less than 1 km	1–5 km	Over 5 km
Walk	𝍸 𝍸 II	III	
Bike	𝍸 II	𝍸 I	I
Bus		𝍸	𝍸 𝍸
Car	III	𝍸 III	𝍸 𝍸 II

Part 3 Choose 2 attributes from the data and create your own Carroll Diagram.

Part 4 Choose 2 attributes from the data and create your own Venn Diagram.



Name: _____ 22

Curriculum Connection
D1.1

Two-Way Tables and Venn Diagrams

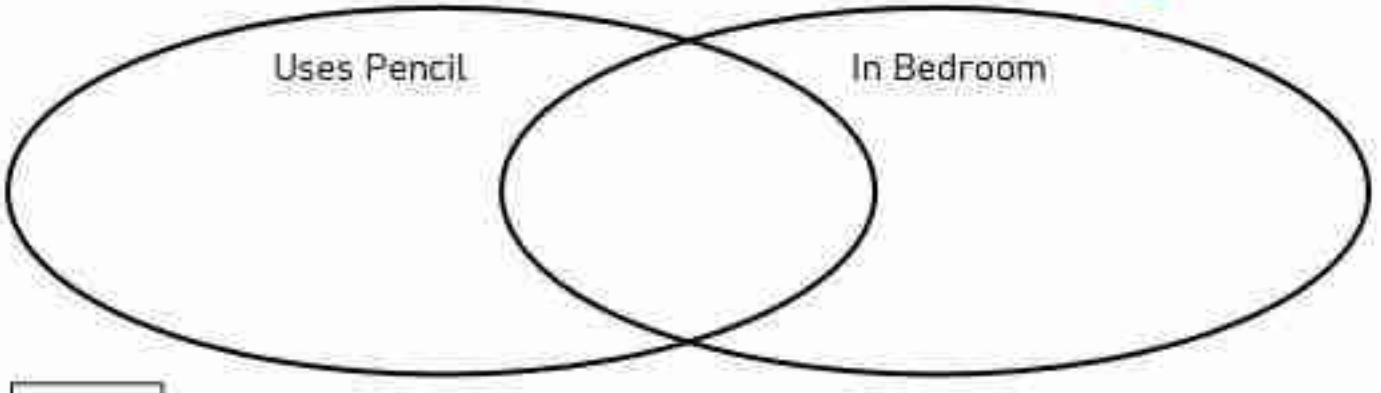
Instructions Read the paragraph below. Represent the data in the tally table, Carroll diagram, and Venn diagram.

Twenty-seven students in a class were surveyed about where they usually do their homework and what tool they prefer to use. Ten students said they work at the kitchen table. Of those ten, four students use a pencil, three use a pen, and three prefer using a laptop. Nine students said they usually do their homework in the living room. Two of them use a pen[illegible] use a laptop, and two use a pen. The final eight students said they do their hom[illegible] their bedroom. Three bedroom workers use a pencil, two use a pen, and thr[illegible]

Tally Table			
Tool Used	**Kitch**	**Living Room**	**Bedroom**
Pencil			
Pen			
Laptop			

Carroll Diagr		
Tool Use	**In Bedroom**	**Bedroom**
Uses Pencil		
Does Not Use Pencil		

Part 2 Fill in the Venn Diagram that is setup to display just two att[illegible] the data



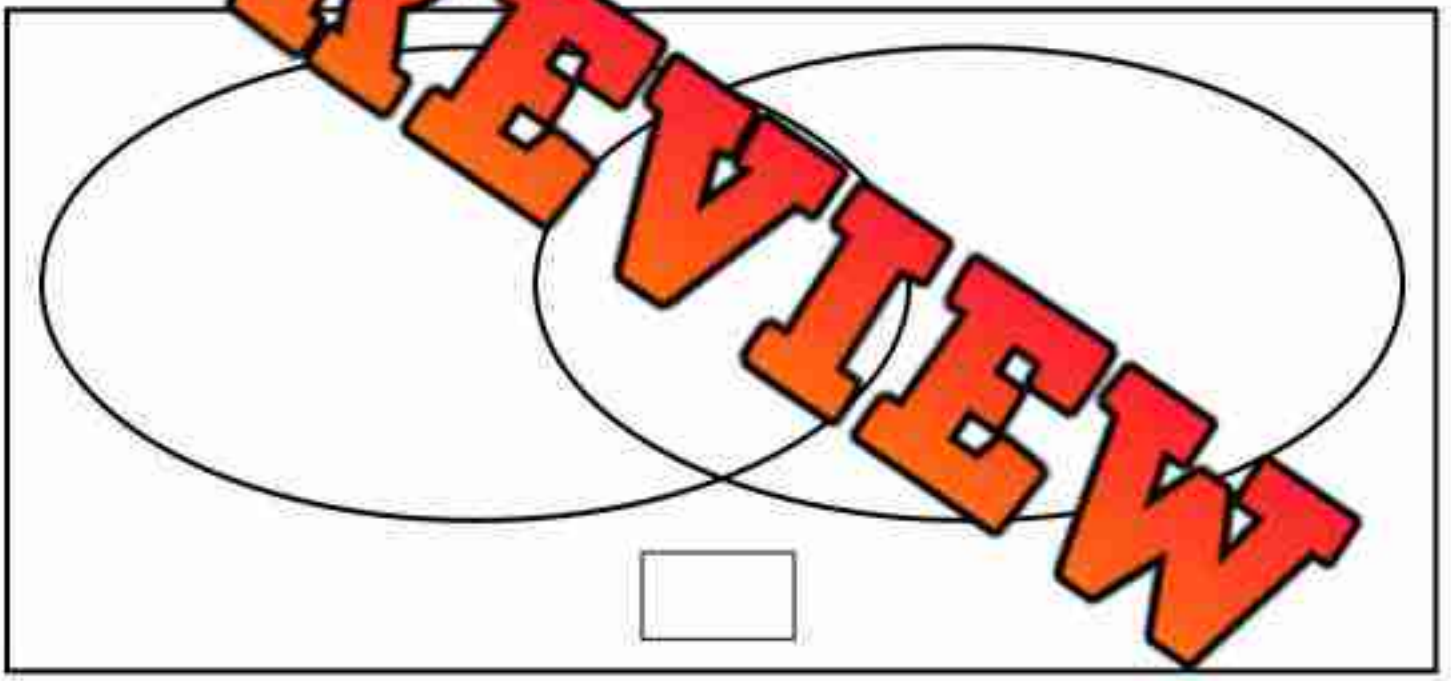
[ ] # of students who don't use a pencil and don't work in their bedroom

Name: _____ 23

Curriculum Connection
D1.1

Part 3 Choose 2 attributes from the data and create your own Carroll Diagram.

Part 4 Choose 2 attributes from the data and create your own Venn Diagram.



Part 5 Questions

1) How many more students use a laptop than a pen to do their homework?	
2) How many students use either a pencil or a pen, but not both?	
3) How many students do not use a laptop at all?	
4) Do more students who use a pencil work in their bedroom or outside of it?	
5) What is the total number of students who do not work in the living room?	

Name: _____ 24

Curriculum Connection
011

Sorting Numbers – Venn, Two-Way, Carroll

742	1428	51	982	1024
3058	4925	485	221	9842

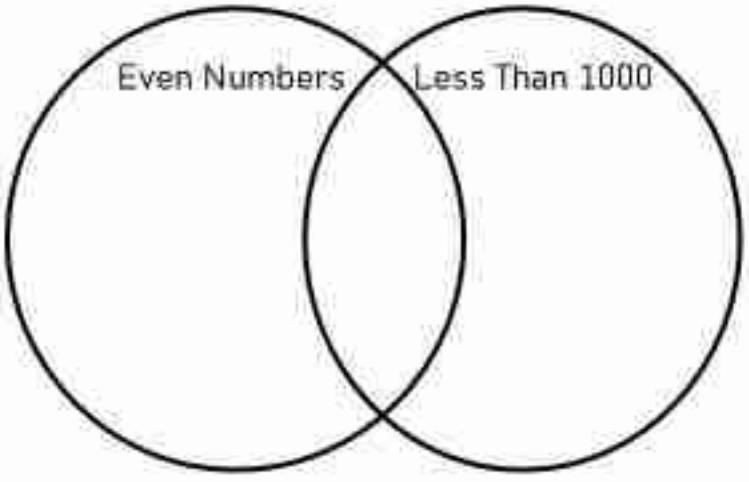
Part 1 Sort the numbers into the correct categories in the Carroll diagram

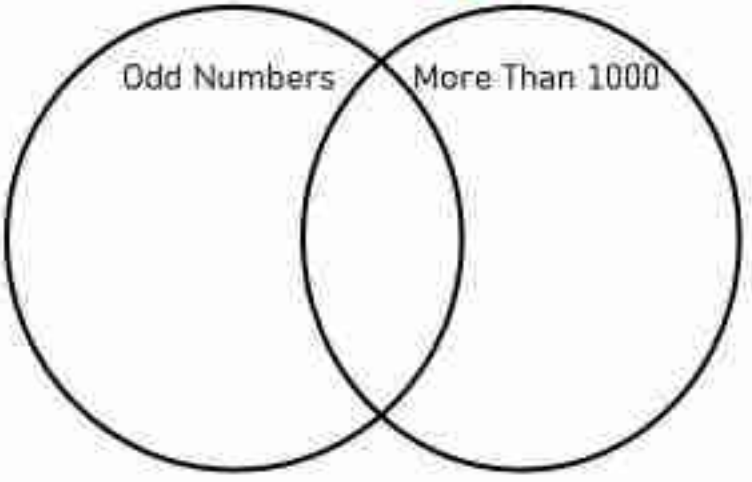
	Less Than 1000	More Than 1000
[illegible]		
Even Nu[illegible]		

Part 2 Fill in the two-[illegible]ble

	Less Than 1000	Mor[illegible]n 1[illegible]	Total
Odd Numbers			
Even Numbers			
Total			

Part 3 Sort the numbers using the Venn Diagram





Name: _____ 26

Curriculum Connection
D1.1

Collecting Data – Carrol Diagram

Directions Survey your classmates using the survey question and fill in the Carrol Diagram

Survey Question: Do you prefer chocolate or vanilla ice cream? Do you prefer your ice cream in a cone or in a bowl?

	Chocolate	Vanilla
Bow		

Questions Fill in the two-way frequency ta elow

	Chocolate		Total
Cone			
Bowl			
Total			

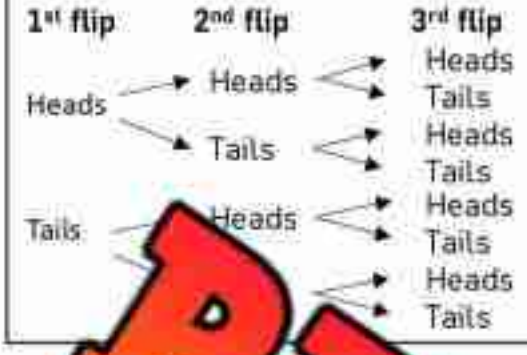
1) How many friends participated in the survey?	
2) Which type of ice cream is the most popular?	
3) Which type of ice cream is the least popular?	
4) What did you learn about the data?	

Name: _____ 27

Curriculum Connection
D1.1

Sorting Data – Tree Diagrams

A tree diagram is a way of showing combinations of two or more events

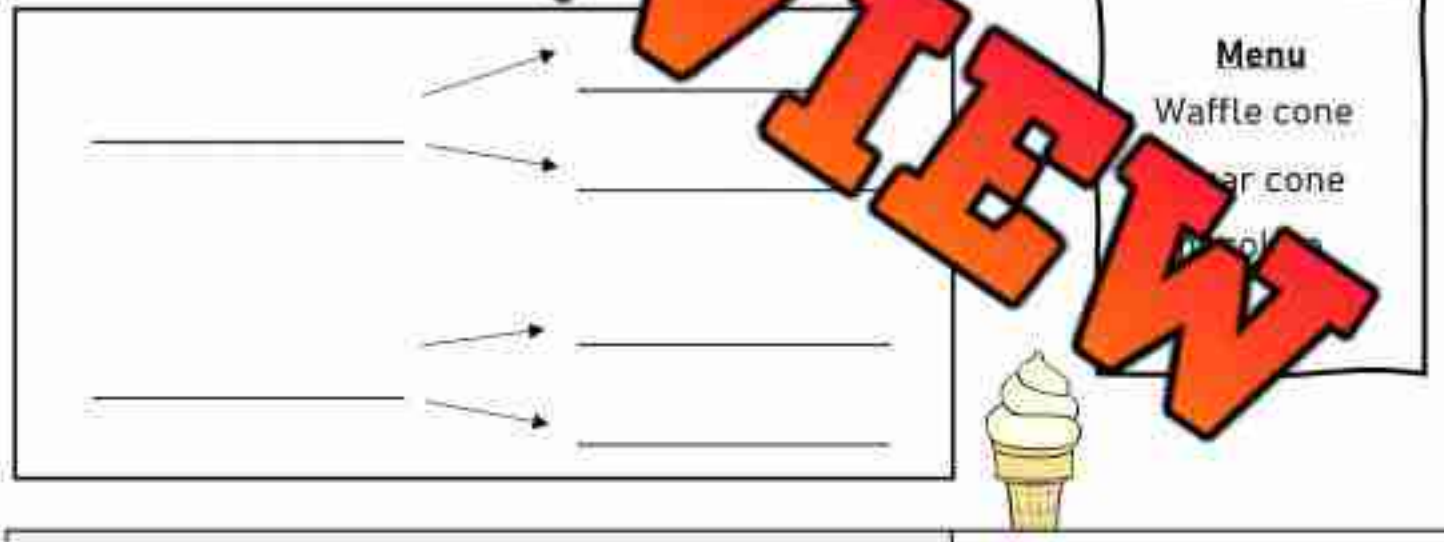


If you flip a coin three times, you could have 8 different combinations of outcomes.

HHH, HHT, HTH, HTT, THH, THT, TTH, TTT
(H=Heads, T=Tails)

Questions Draw a tree diagram to show how many different combinations you could have

An ice cream shop has two flavours of ice cream and two different cones. Show the combinations of ice cream you could have in a tree diagram below.



1) How many combinations of ice cream could you have?	
2) Which combination would you choose?	
3) What combinations of things could you order at a restaurant? Come up with your own example.	

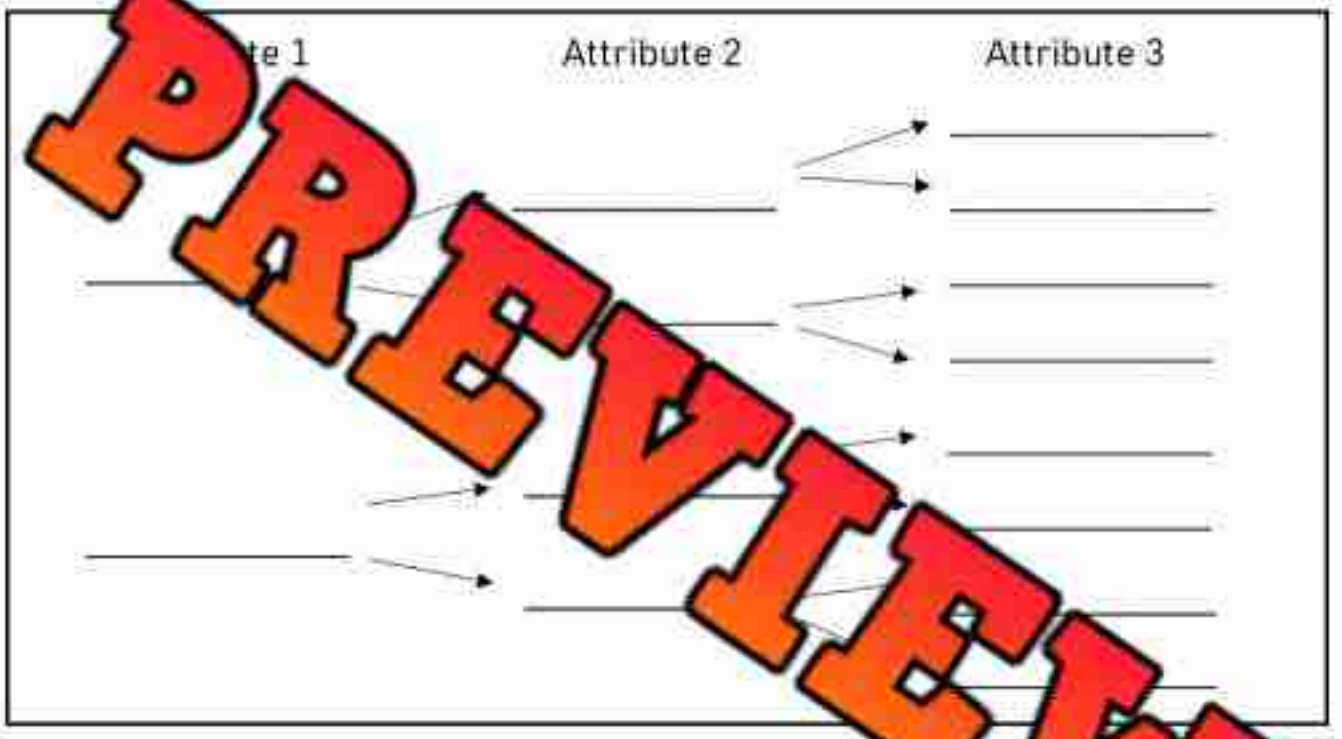
Name: _____ 28

Curriculum Connection
D1.1

Sorting Data – Tree Diagrams

Tree diagrams help us organize and show all the possible combinations when there are two or more choices. **Carroll diagrams** are used when you're sorting items using exactly two attributes.

A pizza shop sells thin and thick crust pizza. They have 2 types of cheese and 2 types of toppings. Check out their menu and draw a tree diagram to show all the combinations of pizza.



Menu

- Thin crust
- Thick crust
- Mozza cheese
- Cheddar Cheese
- Pepperoni
- Mushrooms

1) How many combinations of pizza could

2) Which combination would you choose?

3) Why are tree diagrams used?

4) If you were making hamburgers, list some options you could include for the bun and toppings.

Bun	Toppings

Name: _____ 29

Curriculum Connection
D1.1

Sorting Data – Tree Diagrams

Questions Draw a tree diagram to show how many different combinations you could have

A restaurant sells hot dogs and sausages. They also have toppings. How many different combinations could you have if you were ordering from this menu?

Food	Toppings	Sauce
[illegible] (HD)	Onion (O)	Ketchup (K)
[illegible]	Pickles (P)	Mustard (M)

1) How many combinations of food could you have?	
2) Which combination would you choose?	
3) What toppings/sauces would you want to add?	

Name: _____ 30

Curriculum Connection
D1.1

Sorting Data – Tree Diagrams

Instructions Soap making survey - read the table below and represent it in a tree diagram

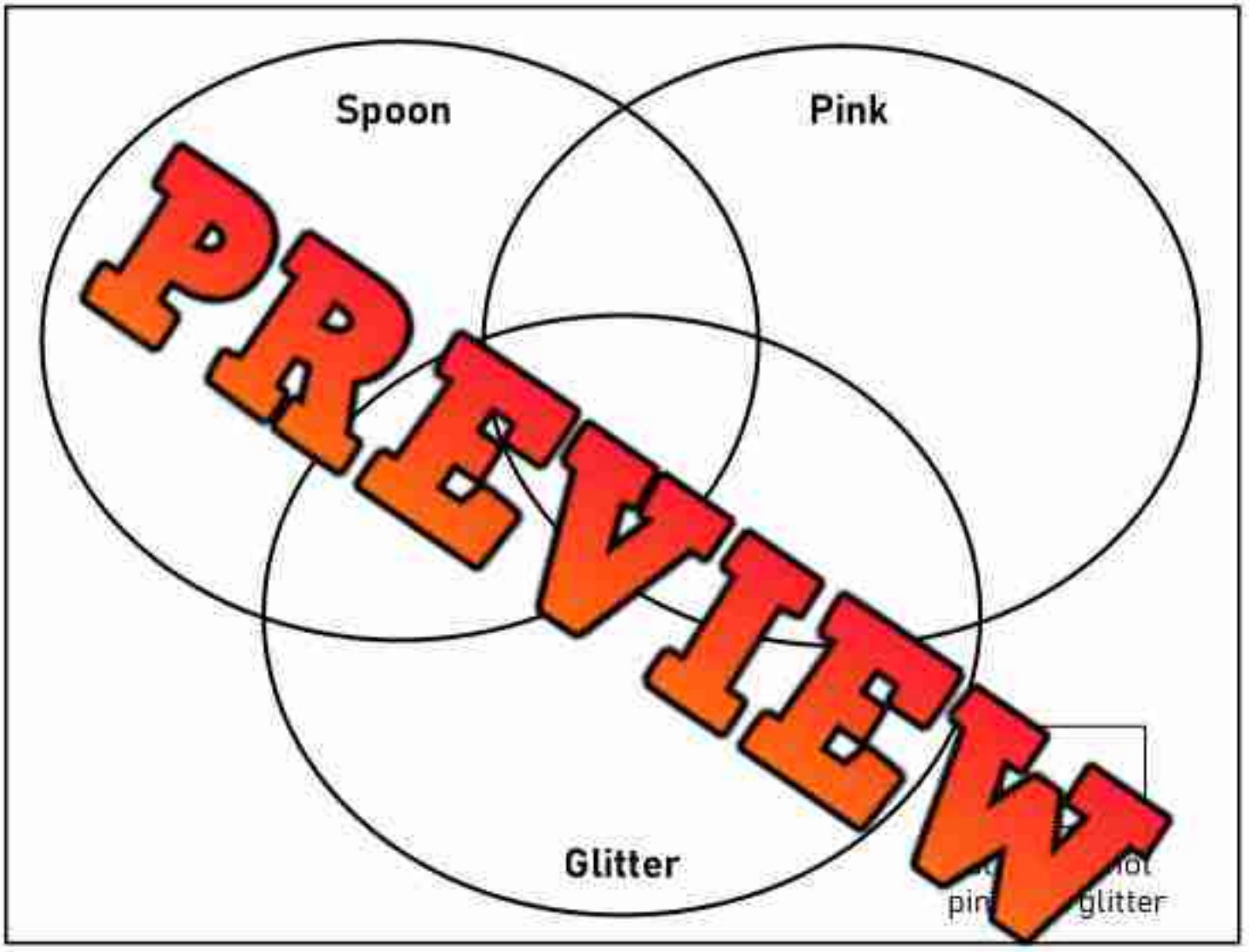
Tool	Colour	Used Glitter?	Number of Students
Spoon	Pink	Yes	4
Spoon	Pink	No	2
Spo	Blue	Yes	1
Sp	Blue	No	3
	Pink	Yes	2
Stick	Pink	No	1
Stick	Blue	Yes	2
Stick		No	1

Name: _____ 31

Curriculum Connection
D1.1

Sorting Data – Venn Diagram – 3 Attributes

Instructions	Use the data from the previous page to create a Venn diagram.



1) How many students used a spoon in total?	
2) How many students used a stick and blue soap?	
3) How many students used a spoon and did not use glitter?	
4) How many more students used a spoon than a stick?	
5) How many students were surveyed in total?	

Name: _____ 32

Curriculum Connection
D1.1

Sorting Data – Tree Diagrams

Instructions Read the paragraph and fill in the tally table and Venn diagram

Twenty-four students were surveyed. Twelve chose a fruit snack. Of those, six chose water and ate it inside, two chose water and ate it outside, three chose juice and ate inside, and one chose juice and ate outside. Eight students chose a granola bar. Of those, three had water and ate it inside, one had water and ate outside, two had juice and ate inside, and [illegible] had juice and ate outside. Four students picked crackers — two had water and ate in[illegible] had juice and ate inside, and one had juice and ate outside.

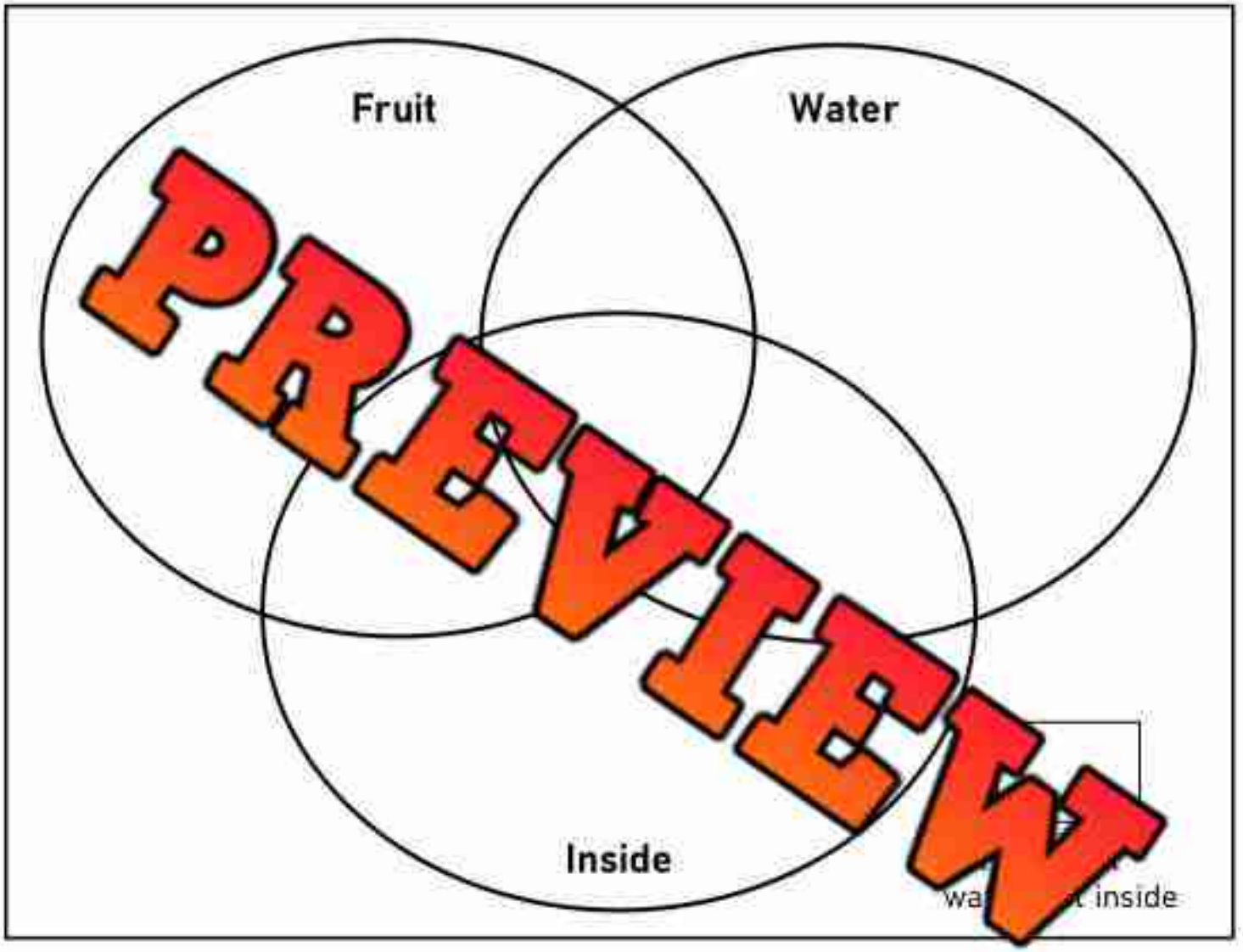
		Inside	Outside	Number of Votes
Fruit	[illegible]			
	[illegible]uice			
Granola Bar	[illegible]ate			
	Ju[illegible]			
Crackers	Water			
	Juice			

Name: _____ 33

Curriculum Connection
D1.1

Sorting Data – Venn Diagram – 3 Attributes

Instructions	Use the data from the previous page to create a Venn diagram.



1) How many students chose fruit as their snack?	
2) How many more students ate inside than outside?	
3) How many students drank juice and did not eat fruit?	
4) How many students ate inside and drank water, but did not choose fruit?	
5) How many students were surveyed?	

Name: _____ 34

Curriculum Connection
D1.4

MEAN

When we calculate the mean, we are finding the average of set of numbers.

Example:

Three brothers named Josh, Cameron, and Morgan went on an easter egg hunt. Josh found 6 eggs, Cameron found 4, and Morgan found 5. At the end of the hunt, their mother told them [illegible] the eggs equally. So, they decided to put all the eggs in the middle and then divi[illegible]ly to themselves. They had 6 + 4 + 5 = 15 eggs and 15 ÷ 3 kids = 5 eggs

Josh			Total		Josh	Cameron	Morgan
6 Candy Bag	4 Candy Ba[illegible]	5 [illegible]	15 [illegible] Bag	=	5 Candy Bag	5 Candy Bag	5 Candy Bag

Questions Its Halloween – [illegible]p the [illegible] then fair share it

Claire	Katie	Ashley		Total		[illegible]tie	Ashley
2 Candy Bag	3 Candy Bag	1 Candy Bag	=	_____ Candy Bag			_____ [illegible]ndy Bag

Mean = _____

Emma	Olivia	Ava		Total		Emma	Olivia	Ava
6 Candy Bag	2 Candy Bag	1 Candy Bag	=	_____ Candy Bag	=	_____ Candy Bag	_____ Candy Bag	_____ Candy Bag

Mean = _____

Name: _____ 35

Curriculum Connection
D1.4

MEAN

Questions	Its Halloween – total up the candy and then fair share it

Mia	Harper	Charlotte	=	Total	=	Mia	Harper	Charlotte
5 Candy Bag	5 Candy Bag	2 Candy Bag	=	_____ Candy Bag	=	_____ Candy Bag	_____ Candy Bag	_____ Candy Bag

Mean = _____

Liam	Noah	Wi	=		=	Liam	Noah	William
4 Candy Bag	5 Candy Bag	9 Candy Bag	=	Bag	=	_____ Bag	_____ Candy Bag	_____ Candy Bag

Mean = _____

Avery	Skylar	Zane	=	Total	=	Liam	Noah	William
10 Candy Bag	6 Candy Bag	8 Candy Bag	=	_____ Candy Bag	=	_____ Candy Bag	_____ Candy Bag	_____ Candy Bag

Mean = _____

Name: _____ 36

Curriculum Connection
D1.4

MEAN

Mean = the average in a set of data

Step 1: Add up the numbers in the data set

Step 2: Divide the sum by the amount of numbers in the set.

Example:

Data set: 5, 3, 8, 5

Step 1: 5 + 10 + 8 + 5 = 28

2: 28 ÷ 4 = (7)

Ques[illegible] the mean for each data set below

[illegible],4	2) 8, 4, 12, 4
3) 12, 6, 10, 8	[illegible]) 20, 10, 30, 20
5) 23, 35, 24, 30	[illegible]46
7) 12, 19, 12, 26, 31	8) 15, 8, 20, 16, 11
9) 13, 18, 17, 22, 30	10) 42, 36, 55, 23, 14

Name: _____ 37

Curriculum Connection
D1.4

MODE

Mode: The mode is the number that happens the most in a group of data. It shows what is most popular.

For example:
Thirteen Grade 3 students were asked how old they are. Their answers were:
8, 7, 8, 8, 7, 8, 8, 7, 7, 8, 8, 8, 8

- **7 years old**: 4 students
- **8 years old**: 9 students

Age	7	8
Frequency	4	9

So, the m[illegible]ecause more students are 8 than 7.
👉 If tw[illegible]icked the same amount, both are the mode.
👉 T[illegible]t always the mode — the one that shows up the most is!

Questions G[illegible]eople[illegible]ked their age. They are listed in the data sets below[illegible]n th[illegible]table and write the mode(s).

Data Set	Ordered List	Mode
1) 13, 15, 11, 16, 11, 13, 11	[illegible] 15 16 / Frequen[illegible]	
2) 22, 25, 23, 22, 25, 28	# 22 [illegible] 25 [illegible] / Frequency	
3) 37, 49, 35, 37, 49, 35, 49, 35	# 35 37 49 / Frequency	
4) 65, 54, 58, 58, 54, 65, 54, 58	# 54 58 65 / Frequency	

Name: _____ 38

Curriculum Connection
D1.4

MODE

Questions	Answer the questions below

1) Justin tracks what time he goes to bed at for 15 days. His bedtimes are written below:

7, 11, 8, 8, 7, 9, 10, 10, 7, 8, 9, 9, 8, 11, 9

a) Fill in the frequency table

	8	9	10	11
Frequency				

b) What is the mode?

c) What does the mode tell us?

2) Warren's friends were asked which dinner they want at his wedding reception. The results are below:

Fish, fish, chicken, steak, vegetables, vegetables, chicken, steak, chicken, chicken, fish, vegetables, chicken, steak, steak, steak, vegetables, fish, chicken, steak

a) Fill in the frequency table

Food	Fish	Chicken	Steak	Vegetables
Frequency				

b) What is the mode?

c) How does a frequency table help us find the mode?

Name: _____ 39

Curriculum Connection
D1.4

Mode and Frequency Tables

Questions	Answer the questions below

1) Tracy ran 5 races. Her times in seconds are listed in the data set below:

25, 24, 22, 26, 23

a) Fill in the frequency table

b) What is the

c) When is it po at th ode in a data set?

2) Bella recorded her grades on ma this grades are listed below:

B, C, A, A, A, B, B, C, D, A, A, A, A, B, D A, B B, A, A, A, C

a) Fill in the frequency table

Grades				
Frequency				

b) What is the mode?

3) Courtney did 20 sets up pull-ups. She recorded how many reps she did in each set.

6, 5, 8, 5, 5, 4, 3, 3, 3, 4, 4, 2, 2 ,5, 4, 3, 4, 5, 4, 3

a) Fill in the frequency table

Pull-Ups	2	3	4	5	6	8
Frequency						

b) What is the mode?

Name: _____ 40

Curriculum Connection
014

MODE

Mode: The number that occurs the most in a data set.

Step 1: Order the numbers from smallest to biggest
Step 2: Find the number or numbers that show up the most

Example: 5, 3, 6, 3, 9, 11
3, 3, 5, 6, 9, 11
Answer: 3

	Ordered List	Mode
3, 2, 7, 7	2, 3, 6, 7, 7, 12	7
15, 23, 37, 14, 24,		
131, 147, 75, 147, 44		
134, 135, 165, 173, 165		
12, 10, 0, 0, 12, 18, 0		
190, 165, 214, 316, 214		
16, 25, 25, 16, 25, 16		

1) The number of points scored in a series of football games is listed below. Which score happened most often?

7, 13, 18, 24, 9, 3, 18

2) The amount of rainfall that occurred in April is listed below. Find the mode.

28, 12, 32, 7, 14, 12, 7, 24, 7

Name: _____ 41

Curriculum Connection
D1.4

Mean and Mode

Hockey Goals
6 3 2 2 7
Mean: _____
Mode: _____

Basketball Points
13 22 20 15 15
Mean: _____
Mode: _____

Minutes Read Per Day
12 18 42 36 12
Mean: _____
Mode: _____

[illegible]
95 [illegible]
Mean: _____
Mode: _____

Name: _____ 44

Curriculum Connection
012

Quantitative vs Qualitative Observations

Qualitative Observations
use your senses to observe the results

Quantitative Observations
use measurement tools to make observations

Part 1 Ob[illegible]ture below with your senses. Write as many qualitative [illegible] can (imagine the smell/noise/taste/feel)

Smell: _____

Feel: _____

_____

Se[illegible] _____

[illegible] _____

Part 2 Pretend you can measure the weight, speed, an[illegible] below. Provide a quantitative observation (estimation of these [illegible]

Height: _____cm
Weight: _____kg
Speed: _____km/h

Height: _____cm
Weight: _____kg
Speed: _____km/h

Height: _____cm
Weight: _____kg
Speed: _____km/h

Height: _____cm
Weight: _____kg
Speed: _____km/h

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Age of your pet
   Quantitative / Qualitative
2. Type of music you like
   Quantitative / Qualitative
3. Your favourite food
   Quantitative / Qualitative
4. Number of pencils in your desk
   Quantitative / Qualitative

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Age of your pet
   Quantitative / Qualitative
2. Type of music you like
   Quantitative / Qualitative
3. Your favourite food
   Quantitative / Qualitative
4. Number of pencils in your desk
   Quantitative / Qualitative

Name: _____

Read the description and circle if it is quantitative or qualitative.

1. Age of your pet
   Quantitative / Qualitative
2. Type of music you like
   Quantitative / Qualitative
3. Your favourite food
   Quantitative / Qualitative
4. Number of pencils in your desk
   Quantitative / Qualitative

Name: _____ 47

Curriculum Connection
D1.2

Creating Questions – Qualitative Data

Practice | Write a question and 4 options for answers

1) What is your favourite food?

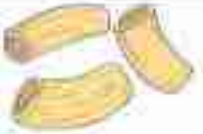
a) Macaroni and Cheese

b) Pizza

c) Hot

d)






2)

a)

b)

c)

d)

3)

a)

b)

c)

d)

4)

a)

b)

c)

d)

Name: _____ 48

Curriculum Connection
D1.2

Creating Questions – Quantitative Data

Practice | Write a question and 4 options for answers

1) How many points did each student in grade 3 get in the basketball game?

a) 0-5

b) 6-10

c) 11-1

d)

2)

a)

b)

c)

d)

3)

a)

b)

c)

d)

4)

a)

b)

c)

d)

Name: _____ 51

Curriculum Connection
D1.5

Horizontal Pictograph - Candy

A **pictograph** is a graph that displays data using symbols or pictures. Read the pictograph below and answer the questions.

Sam and his friends collected candy on Halloween. The amount of candy each friend collected is displayed below in the pictograph.

Friend	Number of Candies Collected	Frequency
S		
Steve		
Tony		
Jill		
Stacy		

 = 3 Candies

a) How much is one candy worth?	
b) Who collected the most candy?	
c) How much more candy did Jill collect than Tony?	
d) Did Sam and Steve collect more or less candy than Stacy and Jill?	
e) How much total candy was collected?	

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

= 3 kilometers

How many total kilometers did all 4 friends run?

_____

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

= 3 kilometers

How many total kilometers did all 4 friends run?

_____

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

= 3 kilometers

How many total kilometers did all 4 friends run?

_____

Name: _____

Fill in the table and answer the question.

Friend	Kilometers Run	Frequency
Ted		
Anne		
Bella		
Craig		

= 3 kilometers

How many total kilometers did all 4 friends run?

_____

Name: _____ 54

Curriculum Connection
D1.5

Vertical Pictograph – Basketball Points

Grace's basketball team counted how many points each of the players scored in a tournament. The point totals for the starting 5 are displayed below in a pictograph.

a) How many points is one basketball worth?	
b) How many points is half a basketball worth?	
c) Who scored the most points in the tournament?	
d) How many total points did all 5 girls score?	
e) How many more points did Jill score than Ellie?	
f) Did Payton and Kaylee score more or less than Grace and Ellie?	
g) Did Jill and Ellie score more or less points than Grace and Kaylee?	

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Write down the number of books each student has.

Friend	Number of Books Students Have	Total
Mia		
Noah		
Emma		
Lucas		

 = 5 Books

Name: _____

Write down the number of books each student has.

Friend	Number of Books Students Have	Total
Mia		
Noah		
Emma		
Lucas		

= 5 Books

Name: _____

Write down the number of books each student has.

Friend	Number of Books Students Have	Total
Mia		
Noah		
Emma		
Lucas		

 = 5 Books

Name: _____

Write down the number of books each student has.

Friend	Number of Books Students Have	Total
Mia		
Noah		
Emma		
Lucas		

 = 5 Books

Name: _____ 58

Curriculum Connection
013

Creating a Horizontal Pictograph

Kevin and his friends went to an arcade on Saturday. They had a contest to see who could win the most tickets from the arcade games. The results are displayed in the table below.

Kevin	110
Neil	50
Steve	75
Dane	100
Chris	80

Questions a pict t displays the data above

Kevin	
Neill	
Steve	
Dane	
Chris	

= 10 tickets

1) Who won the most tickets?	
2) How many more tickets did Dane win then Neil?	
3) How many more tickets did Kevin get than Steve?	
4) Neil and Chris think they have more tickets than Steve and Dane. Are they right?	
5) How many total tickets did the 5 kids win?	

Name: _____ 59

Curriculum Connection
013

Creating a Vertical Pictograph

Colton played 5 games of basketball last week. The number of points he scored in each game is displayed below. Create a pictograph to show his points.

Game 1	Game 2	Game 3	Game 4	Game 5
20	16	18	14	24

Game 1	Game 2	Game 3	Game 4	Game 5

=

1) Which game did he score the most points? _____ Least points? _____

2) Did he score more or less points in games 1 and 2 than games 4 and 5? _____

3) How many total points did he score in all 5 games? _____

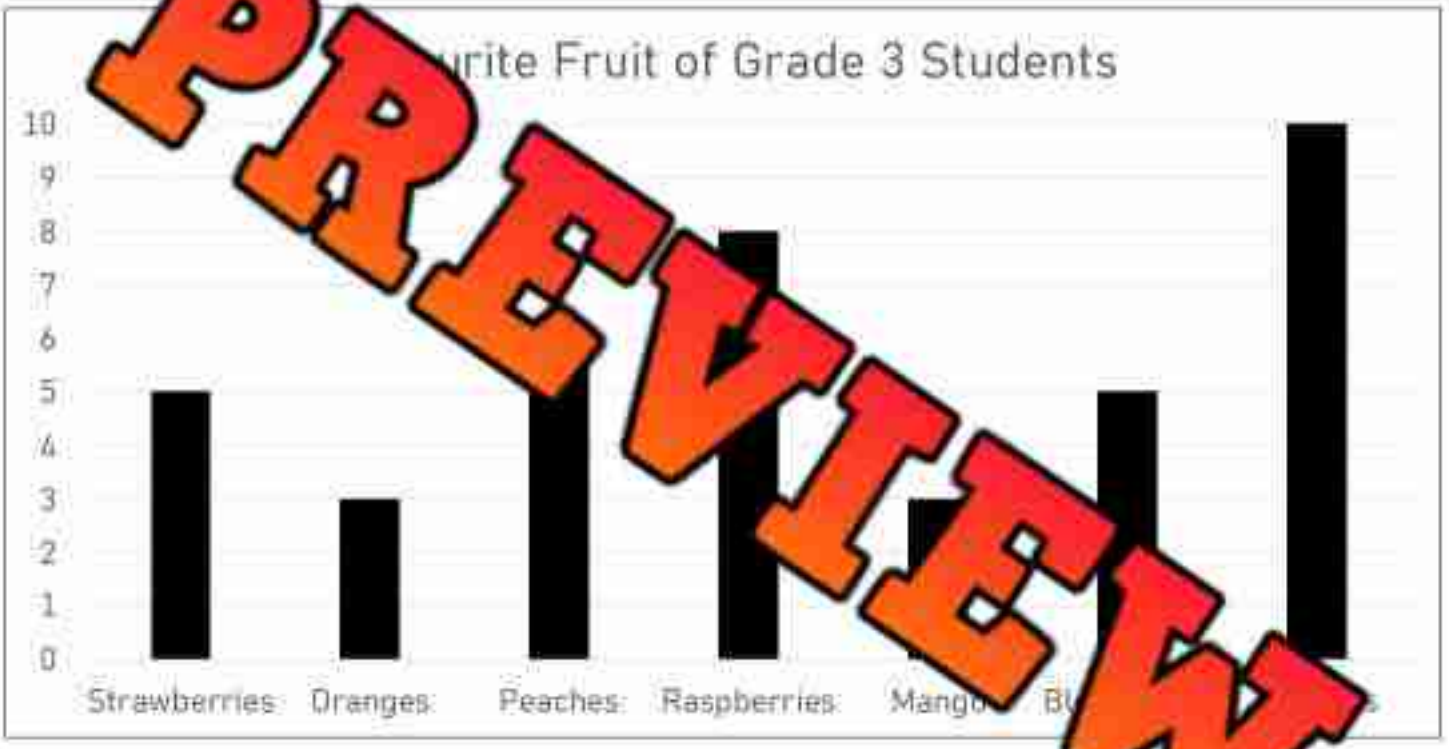
Name: _____ 61

Curriculum Connection
D1.5

Why We Use Graphs

Luca wanted to know which fruit was most popular in his class. He collected data and displayed it in the bar graph below.

Strawberries	Oranges	Peaches	Raspberries	Mango	Blueberries	Bananas
𝍸	𝍸	𝍸	𝍸 𝍸	𝍸	𝍸	𝍸 𝍸



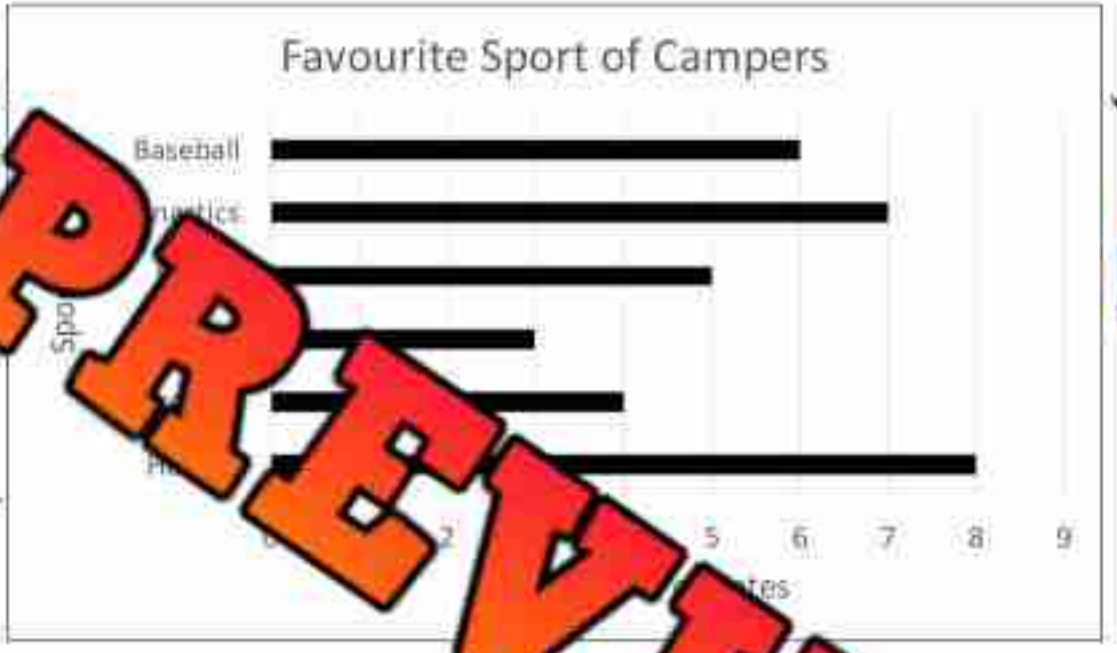
a) Which fruit was the most popular?		
b) How many students liked bananas more than oranges?		
c) Does the graph and table show the same data?	Yes	No
d) Which is easier to read, the table or the graph? Which one allows you to find the most popular fruit faster?	Graph	Table
e) What are the benefits of using a graph?		
_____ _____		

Name: _____ 63

Curriculum Connection
D1.5

Horizontal Bar Graph – Favourite Sport

The kids at camp were asked which sport they liked the best. They surveyed each kid and displayed the results in a horizontal bar graph.



a) Which sport was most popular?	
b) Which sport was the least popular?	
c) Who is the population that was surveyed?	
d) How many kids liked basketball and soccer the best?	
e) What is the title of the y-axis ↑ ?	
f) What is the title of the x-axis → ?	
g) What is the title of the graph?	
h) How many kids were surveyed?	
i) What is the statistical question for this graph?	

Curriculum Connection
D1.5

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

1) Which category of drink is most popular?

2) How many people were surveyed?

Name: _____

1) Which category of drink is most popular?

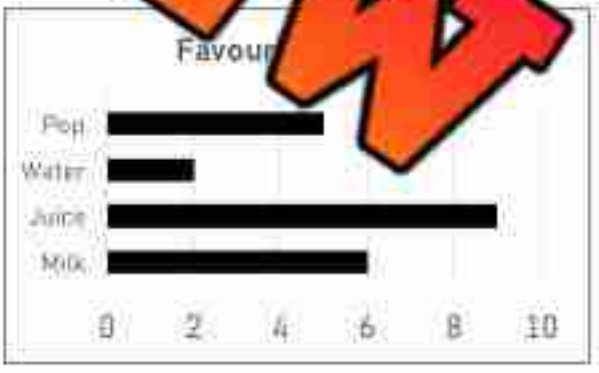
2) How many people were surveyed?

Name: _____

1) Which category of drink is most popular?

2) How many people were surveyed?

Name: _____



1) Which category of drink is most popular?

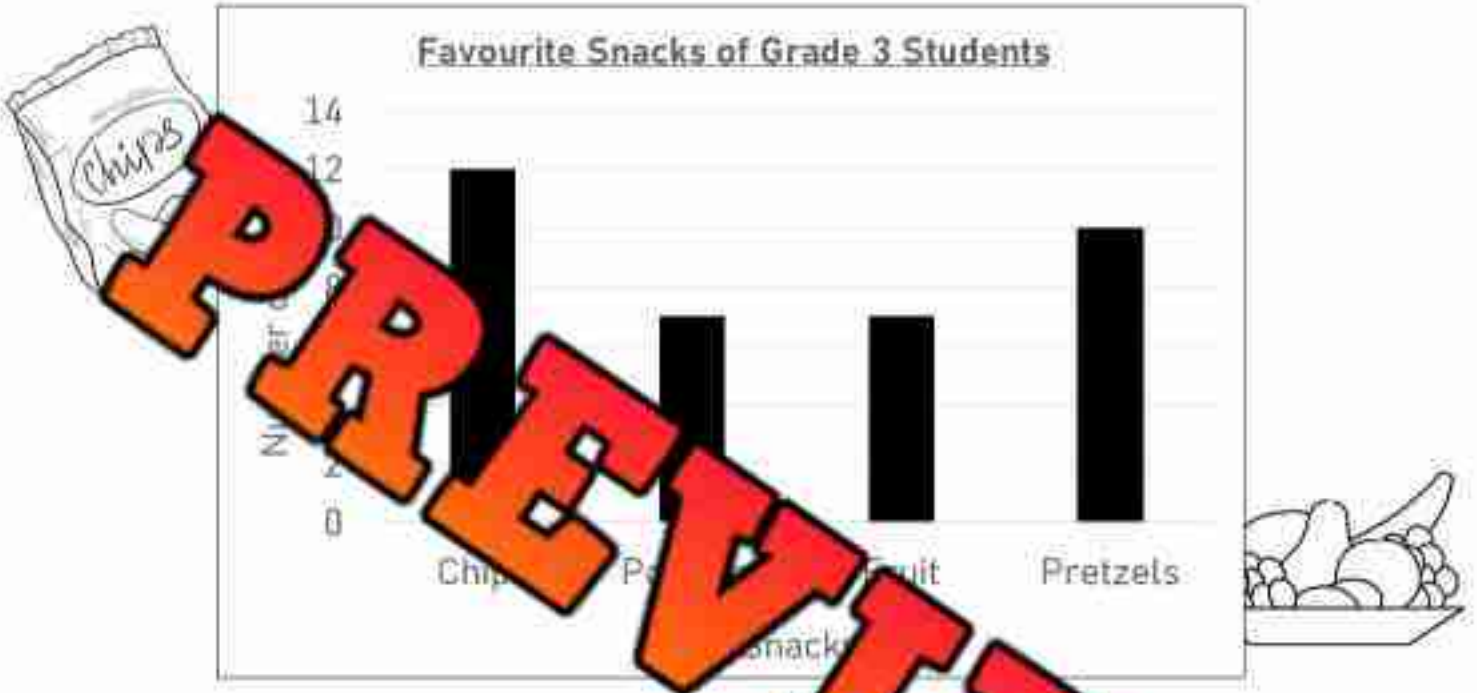
2) How many people were surveyed?

Name: _____ 65

Curriculum Connection
D1.5

Reading a Bar Graph – Favourite Snack

Roger asked his grade 3 classmates what their favourite snack was. He gave them four options. His results are below.



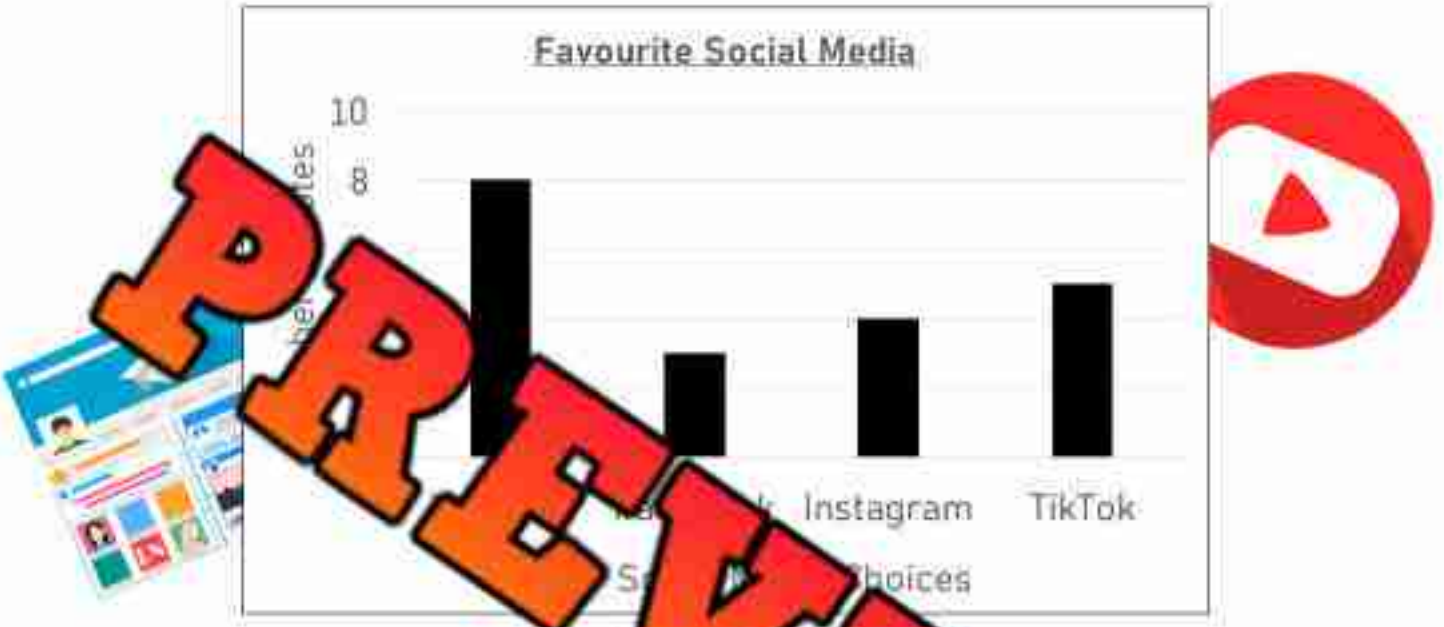
a) Which snack was most popular?	
b) Which snack was the least popular?	
c) How many more kids chose chips than fruit?	
d) How many kids liked popcorn and fruit together?	
e) Roger thinks chips were more popular than popcorn and fruit put together. Is he correct?	
f) What other snack options could he have included?	
g) How many kids were surveyed?	
h) What is the statistical question for this graph?	

Name: _____ 69

Curriculum Connection
D1.5

Surveying a Suitable Representation

Bella wants to know what the most popular social media app is at her school. She decides to ask 20 students from her grade 3 class.



a) Which social media was the most popular?

b) Did Bella find out which social media was the most popular in the school? Explain.

c) Who should she have asked if she wanted to know what the most popular social media app was in her entire school?

d) If she only wanted to survey around 20 kids in total, how could she do it so that she still found out what the most popular app was in the whole school?

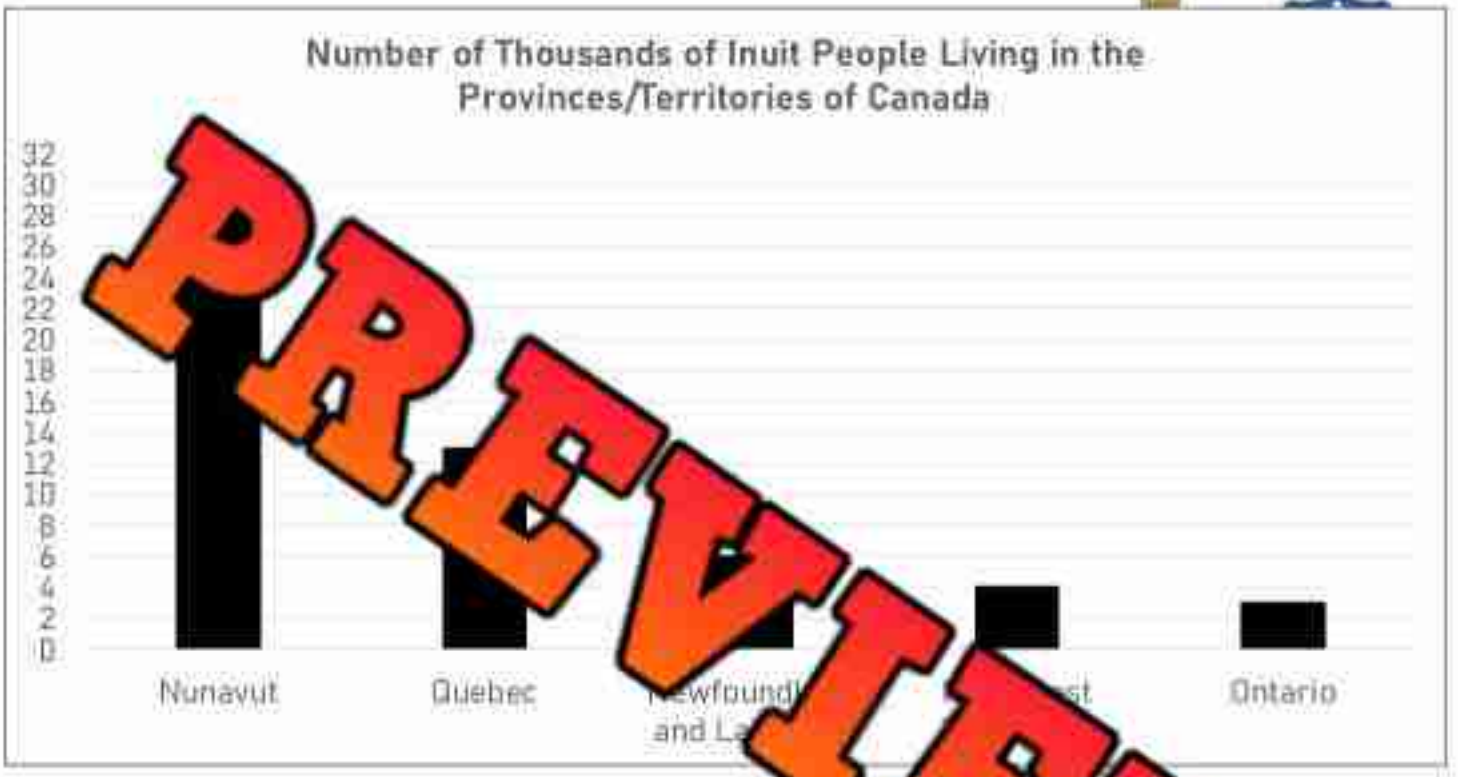
Name: _____ 71

Curriculum Connection
D1.5

Inuit Living in Canada

Statistical Question

Which 5 provinces/territories do most Inuit people live in?



Source: Statistics Canada

Interpret What did you learn from the graph?

1) Where do most Inuit people live in Canada?

2) What surprised you about the data?

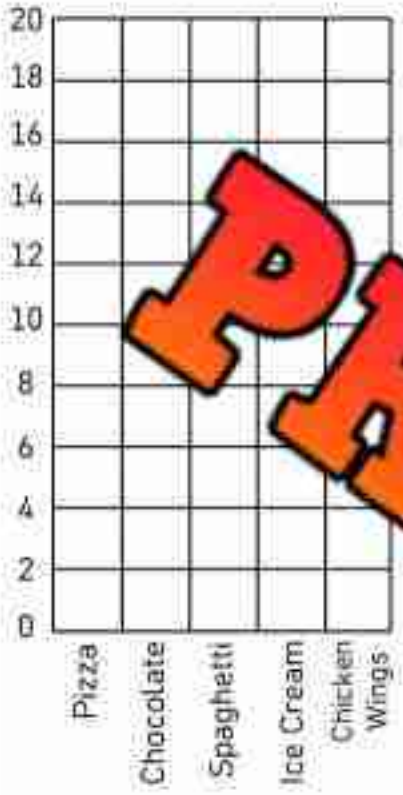
3) Where in Canada do most Inuit people live – in the north or south? Where do you think they live in provinces – the northern or southern regions?

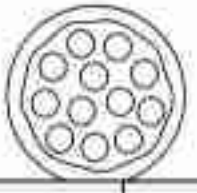
Name: _____ 72

Curriculum Connection 013

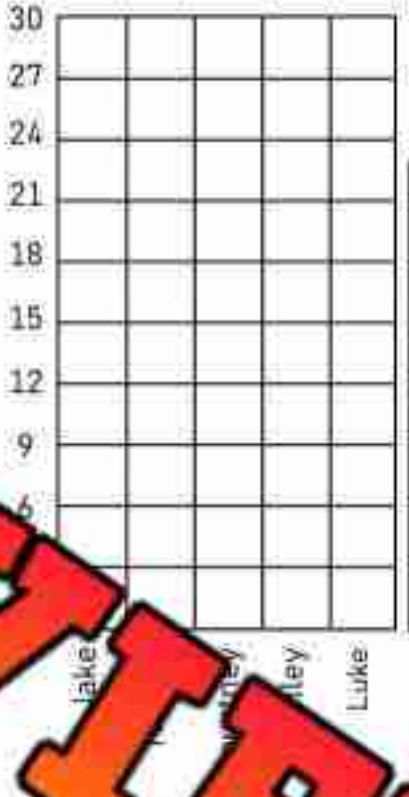
Drawing Bar Graphs

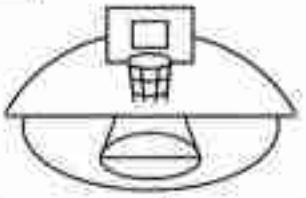
Questions | Draw the bars for each of the bar graphs below



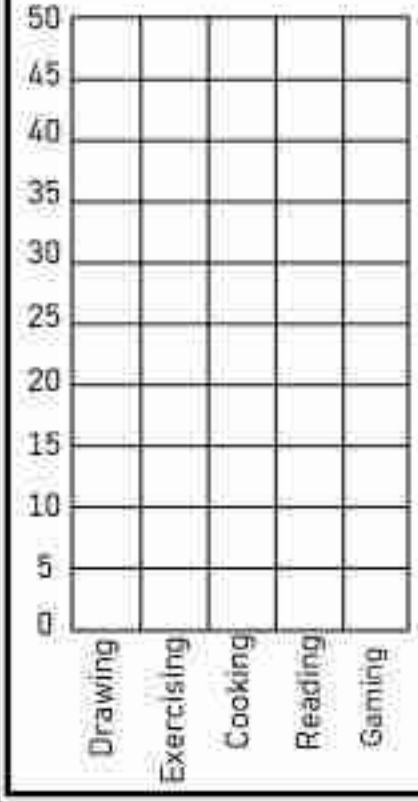


Favourite Food	# of votes
Pizza	14
[illegible]	10
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	6

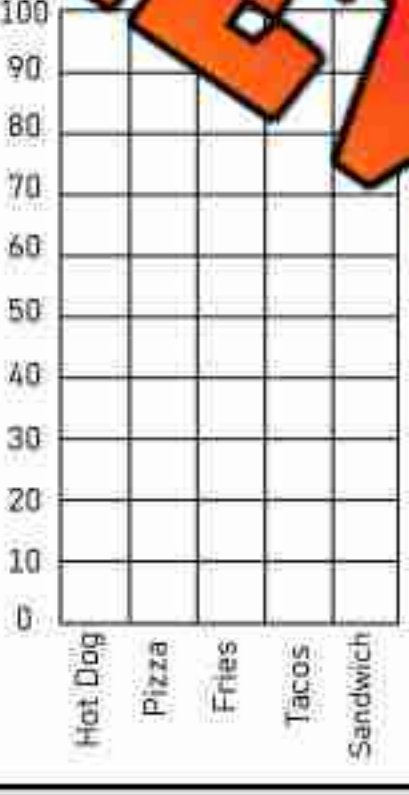




Player	# of points
Jake	30
Nathan	12
Courtney	18
Ashley	24
Luke	6



Favourite Hobby	# of votes
Drawing	10
Exercising	20
Cooking	35
Reading	25
Gaming	40



[illegible] Food	# of votes
Hot Dog	30
Pizza	60
Fries	50
Tacos	80
Sandwich	35

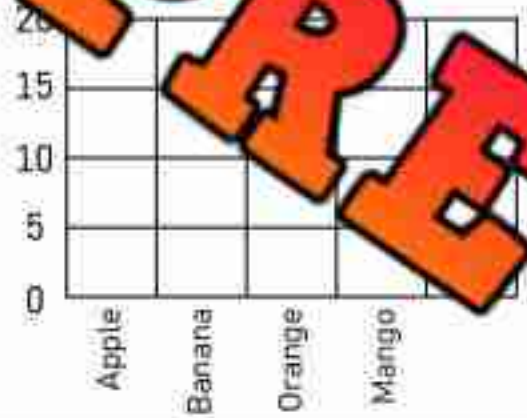
Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Draw the bars for the bar graphs below.

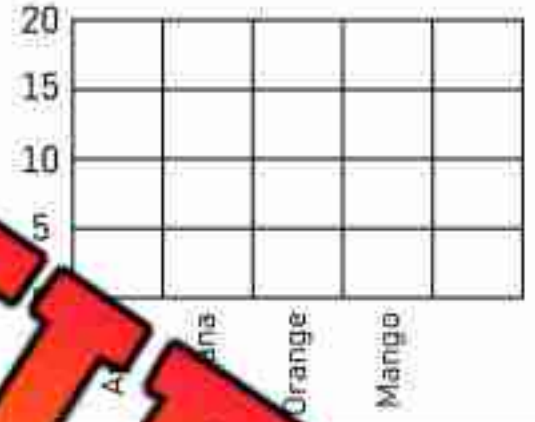
Fruit	Apple	Banana	Orange	Mango
Votes	20	10	15	5



Name: _____

Draw the bars for the bar graphs below.

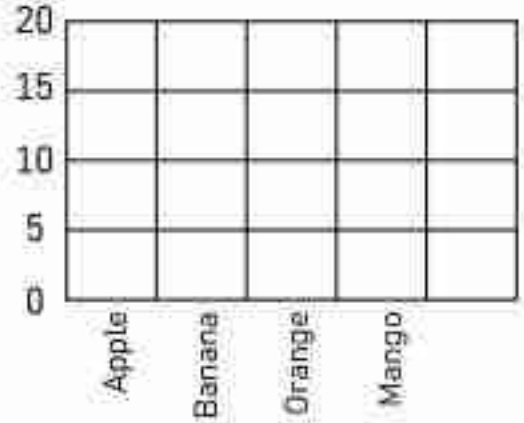
Fruit	Apple	Banana	Orange	Mango
Votes	20	10	15	5



Name: _____

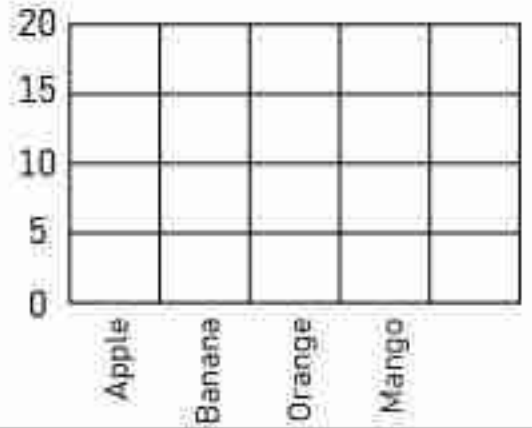
Draw the bars for the bar graphs below.

Fruit	Apple	Banana	Orange	Mango
Votes	20	10	15	5



Draw the bars for the bar graphs below.

Fruit	Apple	Ba		Mango
Votes	20	10		5



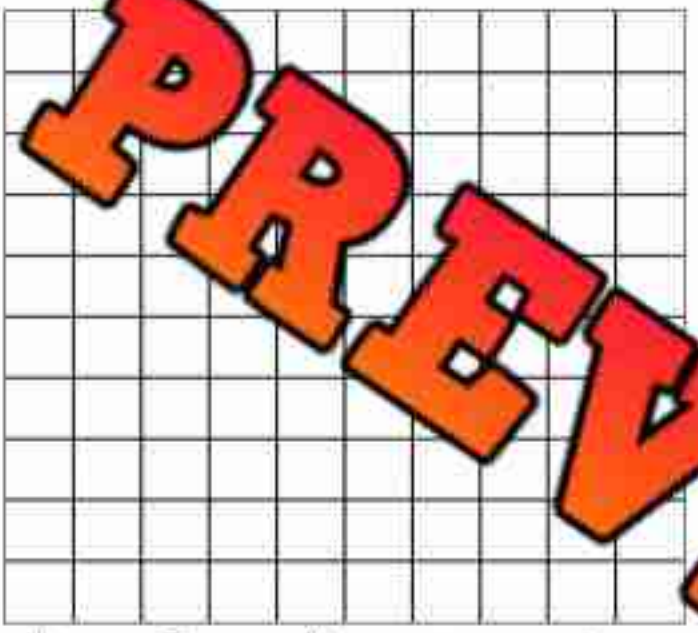
Name: _____ 75

Curriculum Connection
013

Creating Scale

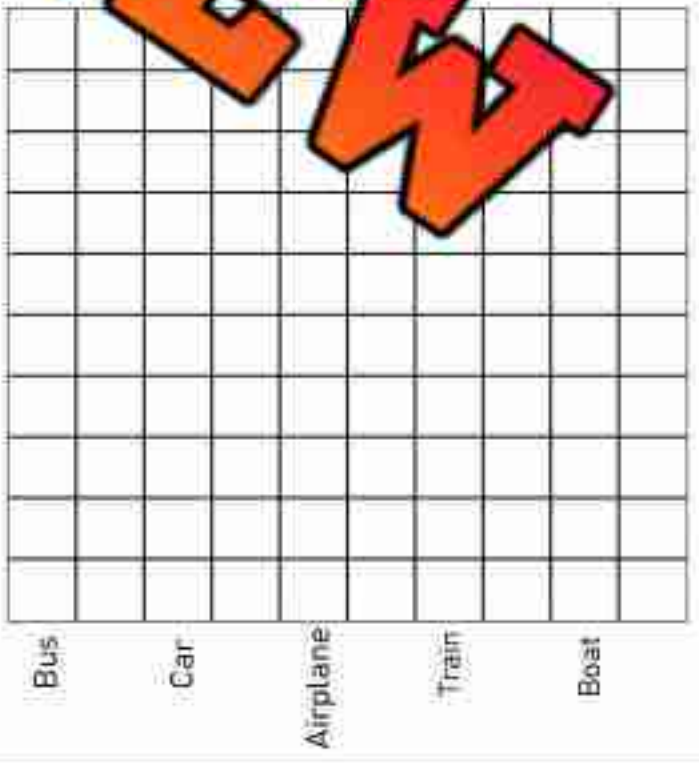
When you create a scale for your graph, you need to look at the data so you can decide what to go up by. The goal is to create a graph that will fill the graph area.

Step 1: Look at the data. Find the lowest and highest numbers.
Step 2: Count how many lines you have to plot your data.
Step 3: Decide what to go up by to ensure you have enough space to plot ALL the data.



Favourite Dessert	# of votes
Brownie	14
Ice Cream	12
Cookie	2
D	16
P	6

Transportation Method	# of votes
Bus	5
Car	15
Airplane	30
Train	25
Boat	40



Name: _____ 77

Curriculum Connection
D1.3

Activity Title: 4-Corners Scaling Game

Objective What are we learning about?

Students will learn to read data presented in a table and decide on the appropriate scale to use for creating various types of graphs.

Materials What you will need for the activity.

- Data table o[illegible] the teacher
- Four signs la[illegible] A, B, [illegible] for each corner of the roo[illegible]

Instructions How you will comp[illegible] acti[illegible]

1. Explain to the students the importance [illegible] osing [illegible] scale for graphing data and how different scales can affect t[illegible] [illegible] eadability of the data.
2. Show the students one of the data tables provided be[illegible]ow. Y[illegible] project the table to the class.
3. Present multiple-choice options for the scale that could be used to graph the data. Each corner of the room will represent one of the multiple-choice answers.
4. Read out the scale options and ask the students to move to the corner that they believe represents the best scale for the data.
5. Once all students have chosen a corner, discuss the correct answer and explain why it is the best choice.
6. Repeat the process with different data tables and scale options.

Name: _____ 78

Curriculum Connection
D1.3

Table 1 Analyze the data and then move to one of the corners of the room

Fruits	Votes
Grape	40
pple	10
	50
Ba n	30
Orange	20

Table 1

Scale Options:

- A: 5
- B: 10
- C: 15
- D: 20

Name: _____ 85

Curriculum Connection
D1.3

Table 8 | Analyze the data and then move to one of the corners of the room

Seasons	Votes
Summer	33
Fall	18
W[illegible]	15
R[illegible]y	12
Spring	22

Table 8

Scale Options:

- A: 1
- B: 2
- C: 5
- D: 10

Name: _____ 87

Curriculum Connection
D1.3

Table 10 Analyze the data and then move to one of the corners of the room

Books	Votes
Fantasy	75
ystery	25
Hi y	20
Adv tu	50
Science	100

Table 10

Scale Options:

- A: 25
- B: 5
- C: 10
- D: 20

Name: _____ 88

Curriculum Connection
D1.2

Collecting Data

Directions Create your own statistical question and survey your classmates

Statistical Question ***Example:*** **Which flavour of ice cream is most popular [illegible]ade 3s?**	_____ _____ _____

Categ					
Tally					
Frequency					

Interpret What did you learn from your [illegible]?

Interpreting Your Survey Results

1. How many people did you survey? _____
2. Which category was the most popular? _____
3. Which category was the least popular? _____
4. If you asked your entire school, which category do you think would win? Explain.

_____

5. Did any of the survey results surprise you?

I'm surprised that _____

_____

Name: _____ 89

Curriculum Connection
013

Creating a Bar Graph

Use the data you collected to plot your graph. Remember the following labels:

☐ X axis label ☐ Y axis label ☐ Title ☐ Scale ☐ Categories

Name: _____ 90

Curriculum Connection
D1.2

Collecting Data - Qualitative

We collect data so that we can learn more about something we are interested in. We also collect data to solve a problem.

Examples:
Area of Interest: "What is your favourite animal?"
Solving a Problem: "Are you coming to the party on Saturday?" (this solves the problem of how many will be attending the party).

Survey Q
Area of

Collect data by asking your classmates your survey question

Survey Question: _____
Example: Wh _____
favourite colou _____

Categories				
Tally				
Frequency				

Interpreting Your Survey Results

1. How many people did you survey? _____
2. Which category was the most popular? _____
3. Which category was the least popular? _____
4. If you asked your entire school, which category do you think would win? Explain.

_____

5. Did any of the survey results surprise you?

I'm surprised that _____

_____

Name: _____ 91

Curriculum Connection
013

Creating a Bar Graph

Use the data you collected to plot your graph. Remember the following labels:

☐ X axis label ☐ Y axis label ☐ Title ☐ Scale ☐ Categories

Name: _____ 94

Curriculum Connection
D1.2

Collecting Data - Quantitative

When we collect quantitative data, we are asking a survey question that results in a numbered answer. For example: "How many pets do you have?"

Example:
Area of Interest: "How many hours do you watch TV a day?"
Solving a Problem: "How many hot dogs will you eat at the party this weekend?" (this solves the problem of how many hot dogs you'll need to buy for your party).

Survey Qu
Area o
llect data by asking your classmates your survey question

Survey Questi

Example: How m oks did you read this we

Categories				
Tally				
Frequency				

Interpreting Your Survey Results

1. How many people did you survey? _____

2. Which number/number range was the most popular? _____

3. Which number/number range was the least popular? _____

4. If you asked your entire school, which number/number range do you think would win? Explain. _____

5. Did any of the survey results surprise you?

I'm surprised that _____

_____

Name: _____ 95

Curriculum Connection
013

Creating a Bar Graph

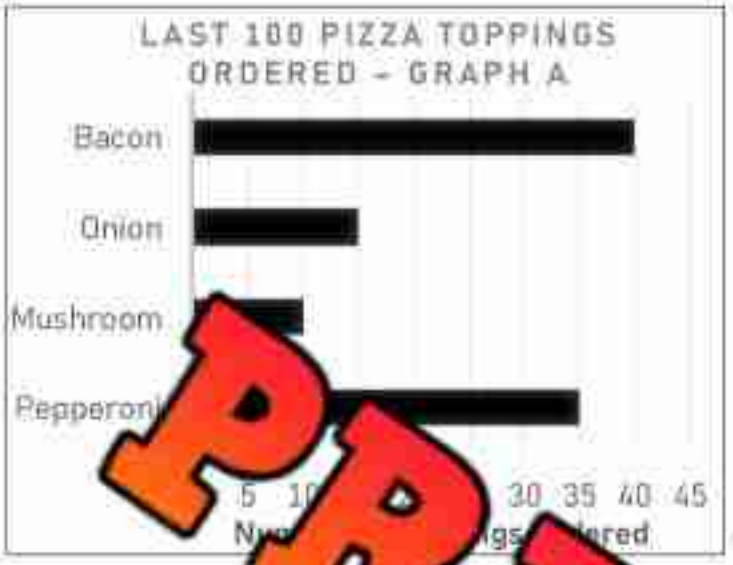
Use the data you collected to plot your graph. Remember the following labels:

- ☐ X axis label
- ☐ Y axis label
- ☐ Title
- ☐ Scale
- ☐ Categories

Name: _____ 98

Curriculum Connection
D1.5

Displaying Data Using Different Graphs



	Last 100 Pizza Toppings Ordered – Graph B
Bacon	
Onion	
Mushroom	
Pepperoni	

= 5 toppings

Questions A[illegible] the [illegible] low

a) Which graph displays the [illegible] ely? Explain your choice.

b) If you were reading this data quickly, which graph [illegible] fa[illegible]re? Explain.

c) When do you think a bar graph is better than a pictograph?

d) When do you think a pictograph is better than a bar graph?

Name: _____ 99

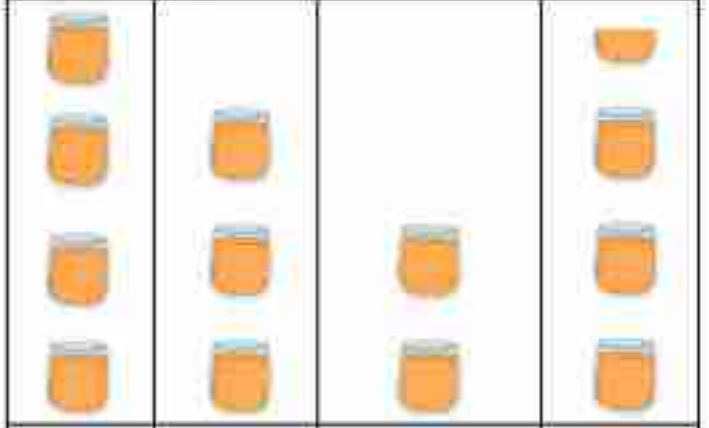
Curriculum Connection
D1.5

Displaying Data Using Different Graphs

Line Plot - Favourite Juice

Apple	Orange	Lemonade	Fruit
✖			
✖			✖
✖	✖		✖
✖	✖		✖
✖	✖	✖	✖
✖	✖	✖	✖
✖	✖	✖	✖
✖	✖	✖	✖

Pictograph - Favourite Juice



Apple	Orange	Lemonade	Fruit

= 2 Votes

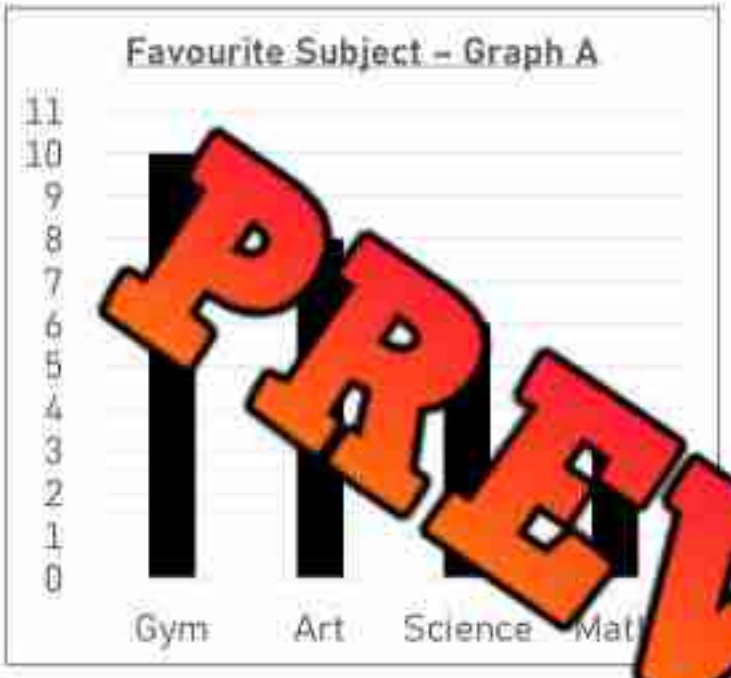
Questions	Answers
a) What is the difference between a dot plot and a pictograph? Which graph always uses one-to-one correspondence?	
b) If you were reading this data quickly, which graph would be faster to read? Explain.	
c) When do you think a dot plot is better than a pictograph?	
d) When do you think a pictograph is better than a dot plot?	

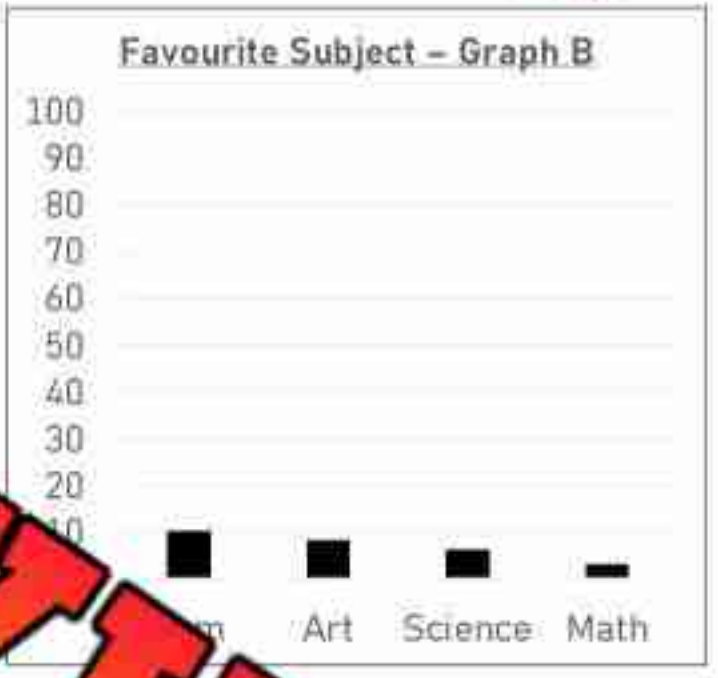
Name: _____ 100

Curriculum Connection
D1.5

Favourite Subject – Examining Scale

The two graphs below display the same data. Examine both graphs and answer the questions below.





Questions What do you notice about the graphs?

a) What is the scale in Graph A?	
b) What is the scale in Graph B?	
c) Which graph uses more of the space?	

d) Which graph is easier to read and interpret? Why is that graph better?

e) Why is it important to choose an appropriate scale?

Name: _____ 102

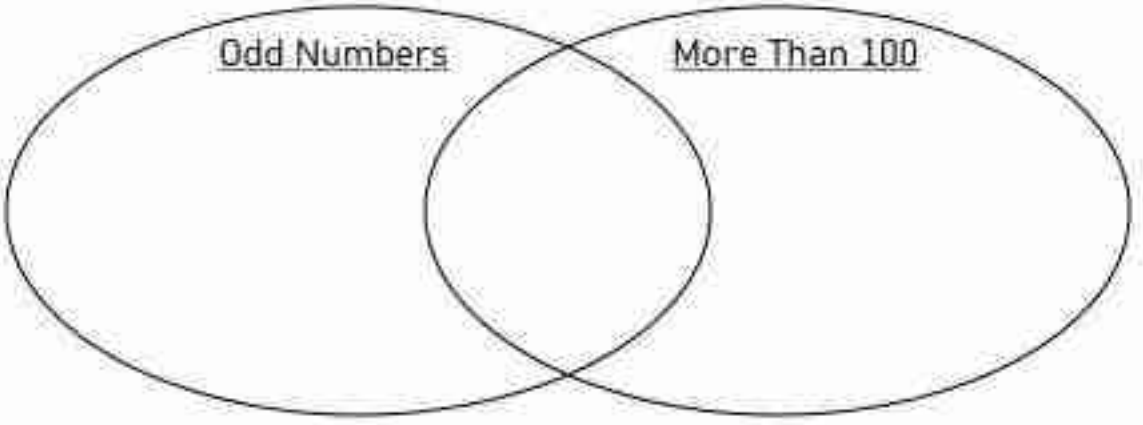
Unit Test – Data Literacy

Part 1 Sort the numbers into the correct categories in the Carroll Diagram

232	536	43	15	96
185	102	77	63	752

	Less Than 100	More Than 100
Odd Numbers		
Even Numbers		

Part 2 Sort the numbers using the Venn Diagram

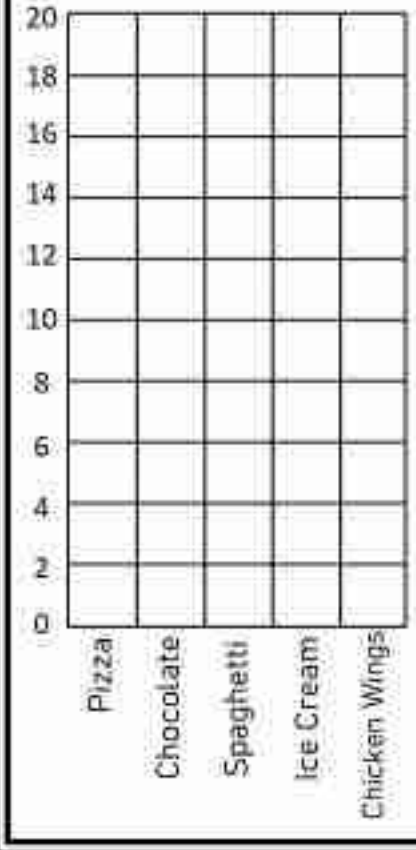


Part 3 Read the graph and answer the questions below

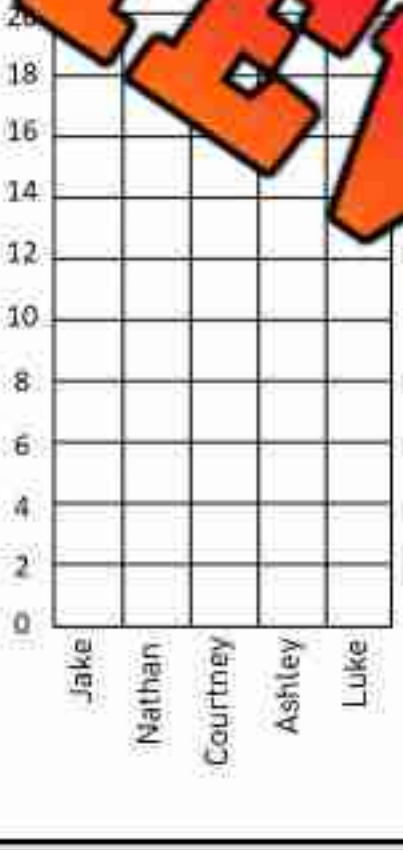
Hockey Goals
4 1 5 4 6
Mean: _____
Mode: _____

Basketball Points
15 25 18 20 22
Mean: _____
Mode: _____

Part 4 Draw the bars for ea[illegible] the ba[illegible]s below



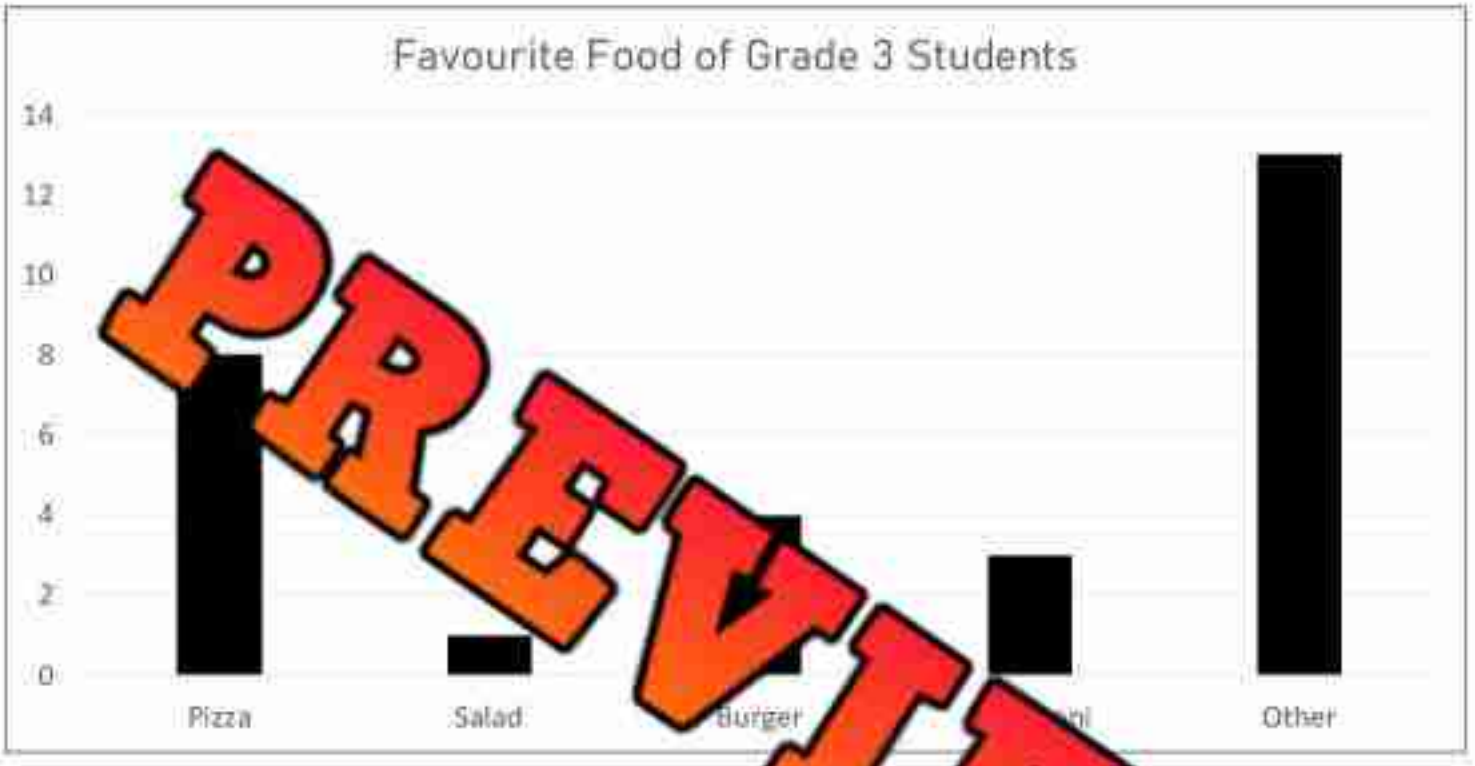
Favourite Food	# of votes
Pizza	6
Chocolate	5
Spaghetti	10
Ice Cream	18
Chicken Wings	14



[illegible]layer	# of points
[illegible]	7
Nathan	10
Courtney	4
Ashley	19
Luke	12

Part 5 Read the graph and answer the questions below

Mr. Simpson collected data from his grade 3 class. He asked them what their favourite food is. He graphed the results in the bar graph below.



a) Which food was the most popular?	
b) How many more students voted for pizza than salad?	
c) What is the scale of the graph?	
d) Was the "other" category more popular than pizza and burgers together?	
e) Which three foods together add up to the total number of votes pizza received?	
f) How many students were surveyed?	

Part 6 Graph the data below in a bar graph

The grade 3s were asked which entertainment they liked the best. The results are below.

Movies	TV Shows	YouTube	Video Games	Music
9	12	21	27	15

a) Which form of entertainment was most popular?	
b) How many more votes did video games get than music?	
c) What scale did you choose for the graph?	
d) How many students were surveyed?	

Grade 3
D2. Probability

	Curriculum Expectations	Pages That Cover the Expectations
D2.1	use mathematical language, including the terms "impossible", "unlikely", "equally likely", "likely", and "certain", to describe the likelihood of events happening, and use that likelihood to make predictions and informed decisions	107 - 127
D2.2	make and test predictions about the likelihood that the mean and the mode(s) of a data set will be the same for data collected from different populations	128 - 136

Name: _____ 107

Curriculum Connection
D2.1

Describing Probability - Certain

If an event will definitely happen, we describe the probability of the event as certain. **Certain** means something will for sure happen!

Examples of certain events:
1) You will go to the bathroom today
2) You will sleep tonight

Questions e event certain – yes or no?

1) You will e ay	Yes	No
2) You will breath o	Yes	No
3) You will eat something today	Yes	No
4) You will drink something today	Yes	No
5) You will play hockey today		No
6) You will play tag at recess this week 	Ye	No
7) It will rain later today	Yes	No
8) There will be a fire drill today 	Yes	No
9) It will be Friday after Thursday	Yes	No
10) The sun will rise tomorrow morning 	Yes	No

Name: _____ 108

Curriculum Connection
D2.1

Describing Probability - Impossible

If an event will definitely not happen, it is impossible. **Impossible** means that something can't happen!

Examples of impossible events:
1) You will fly like a bird
2) You will teleport to Africa today

Question: Is the event impossible – yes or no?

1) You will b[illegible] teacher tomorrow	Yes	No
2) You will grow 1 m[illegible] day	Yes	No
3) You will jump over a house to[illegible]	Yes	No
4) You will eat a treat today	Yes	No
5) You will find money on the ground today	[illegible]	No
6) You will get a new toy today	Y[illegible]	No
7) It will be Saturday after Monday	Yes	No
8) You will roll a 7 on a 6-sided dice	Yes	No
9) It will rain today	Yes	No
10) You will take over as teacher today	Yes	No

Describing Probability – Certain [illegible] Impossible?

Questions Write 4 examples of events that are certain a[illegible]oss[illegible]

Certain	[illegible]mpossible

Name: _____ 110

Curriculum Connection
D2.1

Describing the likelihood – Equally Likely

Equally likely means that there is an even chance that an outcome will happen. This means during the event, the outcome has the same chance of happening as it does not happening.

For example: Flipping a coin and it landing on heads is an even chance.
Explanation: There is an equal chance of the coin landing heads and not landing heads (tails).

Part 1

Shade in half of the shapes to split them equally

1)

2)

3)

4)

5)

Part 2

Shade in half of the squares in the shapes bel

1)

2)

3)

4)

5)

6)

7)

8)

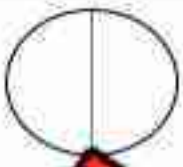
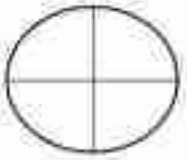
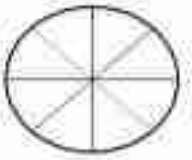
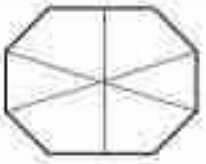
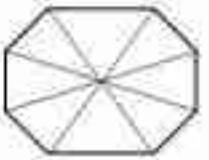
9)

Name: _____ 111

Curriculum Connection
D2.1

Describing the likelihood – Equally Likely

Part 1 Shade in half of the shapes so you have two equal parts

a) 	b) 	c) 
d) 	e) 	f) 

Part 2 half ... mbers below?

1) Half of 2 is _____		7) Half of 12 is _____
2) Half of 6 is _____	5) Half of 8 is _____	f of 20 is _____
3) Half of 4 is _____	6) Half of 14 is _____	Half ... s _____

Part 3 Answer the word problems below

1) There were 20 kids at a birthday party. Half of them asked for hot dogs and the other half asked for hamburgers.	
a) How many asked for hot dogs?	
b) How many asked for hamburgers?	
2) In a class of 16 students, half are boys.	
a) How many kids are boys?	
b) How many are girls?	

Name: _____ 114

Curriculum Connection
D2.1

Describing the Likelihood of Events

Part 1

Circle if the likelihood is possible or impossible

a) You will eat something today

Impossible
Certain

b) You will drive home from school

Impossible
Certain

c) Yo[illegible]gr[illegible]m today

Impo[illegible]
C[illegible]

d) You will breathe today

Impossible
Certain

Part 2

Circle if the [illegible]boo[illegible] likely or unlikely

a) You have a guest speaker today

Even Chance
Likely
Unlikely

b) [illegible]wil[illegible] book today

Even Chance
Likely
[illegible]

c) You will eat chips today

Even Chance
Likely
Unlikely

d) You will win your ga[illegible]day

Even Chance
Likely
Unlikely

e) You will drink pop today

Even Chance
Likely
Unlikely

f) Your favourite team will win today

Even Chance
Likely
Unlikely

Curriculum Connection
D2.1

Exit Cards

Cut Out Cut out the exit cards below and have students complete them at the end of class

Name: _____

Circle the likelihood of the event happening

1) A cat will take your math test.

Certain	Likely	Equally Likely	Unlikely	Impossible

2) You will get a heads when flipping a coin.

Certain	Likely	Equally Likely	Unlikely	Impossible

3) You will eat something today.

Certain	Likely	Equally Likely	Unlikely	Impossible

Name: _____

Circle the likelihood of the event happening

1) A cat will take your math test.

Certain	Likely	Equally Likely	Unlikely	Impossible

2) You will get a heads when flipping a coin.

Certain	Likely	Equally Likely	Unlikely	Impossible

3) You will eat something today.

Certain	Likely	Equally Likely	Unlikely	Impossible

Name: _____

Circle the likelihood of the event happening

1) A cat will take your math test.

Certain	Likely	Equally Likely	Unlikely	Impossible

2) You will get a heads when flipping a coin.

Certain	Likely	Equally Likely	Unlikely	Impossible

3) You will eat something today.

Certain	Likely	Equally Likely	Unlikely	Impossible

Name: _____

Circle the likelihood of the event happening

1) A cat will take your math test.

Certain	Likely	Equally Likely	Unlikely	Impossible

2) You will get a heads when flipping a coin.

Certain	Likely	Equally Likely	Unlikely	Impossible

3) You will eat something today.

Certain	Likely	Equally Likely	Unlikely	Impossible

Name: _____ 117

Curriculum Connection
021

Activity: Probability Card Sort and Rank

Objective

What are we learning about?

Students will learn to identify and classify events as certain, likely, equally likely, unlikely, or impossible by sorting and ranking scenarios based on their probability.

Materials

What you will need for the activity.

- 30 s[illegible]f[illegible]cenario cards with different events w[illegible]m[illegible]"The sun will rise tomorrow").
- A[illegible]board[illegible]ivided into the categories: Certain, Lik[illegible]ke[illegible]Unlikely, and Impossibl[illegible]
- Glue sticks or [illegible]glue

Instructions

How you[illegible]ple[illegible]ity

1. Begin by explaining the concepts [illegible]n, like[illegible]likely, unlikely, and impossible events. Give examples to ensure s[illegible]s u[illegible]nd these probability terms.
2. Have all students stand in a single line in fron[illegible]t[illegible]rd.
3. Provide each individual student with a scenario car[illegible]ea[illegible]dent[illegible]as one card.
4. Display the large categorization board at the front of the class[illegible]students can easily see and access it.
5. Instruct the students to take turns, one by one, reading their scenario card aloud and then discussing where they think the event should be classified on the categorization board.
6. After the student has decided on the classification, have them use glue to attach the card in the corresponding category on the board.
7. Encourage the students to explain their reasoning and engage in discussion with the class if they disagree with the placement of a card.
8. Continue until all 30 cards have been placed on the board.
9. Once all cards have been placed, review the classifications as a class, addressing any misconceptions or disagreements.

Name: _____ 118

Curriculum Connections
021

Scenario Cards	A set of scenario cards with different events

A robot will serve lunch at school.	You will have a birthday this year.
You[illegible] something on your [illegible]	Your pencil will roll off your desk.
A cow will drive a car.	A [illegible] will bark.
It might rain tomorrow.	You will fly without wings.
You will eat something today.	Your friend may be absent tomorrow.

Name: _____ 119

Curriculum Connections
021

Scenario Cards	A set of scenario cards with different events

A fish will ride a bicycle.	You will have gym class every day.
A coin flip[illegible] or heads.	Your teacher will sing instead of talk all day.
You will see clouds in the sky.	Yo[illegible]ack might fall off [illegible]hair.
You will grow wings overnight.	You might drop your eraser.
You will see a book in your classroom.	Your shoes will talk to you.

Name: _____ 120

Curriculum Connections
021

Scenario Cards	A set of scenario cards with different events

It might snow in winter.	You will have homework this year.
You will see a bird in your [illegible].	You will have lunch at school today.
You will see a bird fly.	You will [illegible] something today.
It will snow in summer.	The school will turn into a rocket ship.
You will blink your eyes today.	You may lose a pencil this week.

Board | Divide each scenario into the following categories

Certain	Likely	Equally Likely		Impossible

Name: _____ 122

Curriculum Connection
D2.1

Likelihood of Events – Rolling a Dice

Rolling a Dice

A dice has 6 sides. Each side has a number of dots between 1 and 6. When you roll a dice, it is possible you could get any of the numbers from 1-6.

Questions Use these term… …ood: impossible, less likely, more likely, certain.

1. What is the likelihood of you rolling a 1?	
2. What is the likelihood of you rolling a 3?	
3. What is the likelihood of you rolling a 1, 2, 3, 4, 5, or 6?	
4. What is the likelihood of you rolling an even number?	
5. What is the likelihood of you rolling a 1, 2, 3, or 4?	
6. What is the likelihood of you rolling a 0?	

Name: _____ 124

Curriculum Connection
D2.1

Describing the Likelihood of Events

Candies

There are 14 candies in a bag. 6 are red, 3 are blue, and 5 are green.

Frequency Fill in the frequency table below

Colour	Frequency

Questions Use these terms to describe: impossible, less likely, equally likely, more likely, certain.

1. What is the likelihood of pulling out a red candy?	
2. What is the likelihood of pulling out a blue candy?	
3. What is the likelihood of pulling out a green candy?	
4. What is the likelihood of pulling out a red, blue, or green candy?	
5. What is the likelihood of pulling out a blue or green candy?	
6. What is the likelihood of pulling out a purple candy?	

Name: _____ 126

Curriculum Connection
D2.1

Describing the Likelihood of Events

Gumball Machine

There are 20 gumballs in a machine. What is the likelihood of you pulling out a red (R), yellow (Y), green (G), or blue (B) gumball?

Frequency Fill in the frequency table below

	Frequency
R	
B	
Yellow	
Green	

Questions Use these terms to describe the likelihood: impossible, less likely, equally likely, more likely, certain.

1. What is the likelihood of pulling out a green gumball?	
2. What is the likelihood of pulling out a red gumball?	
3. What is the likelihood of pulling out a blue or green gumball?	
4. What is the likelihood of pulling out a red or yellow gumball?	
5. What is the likelihood of pulling out a blue, red, yellow, or green gumball?	
6. What is the likelihood of pulling out a pink gumball?	

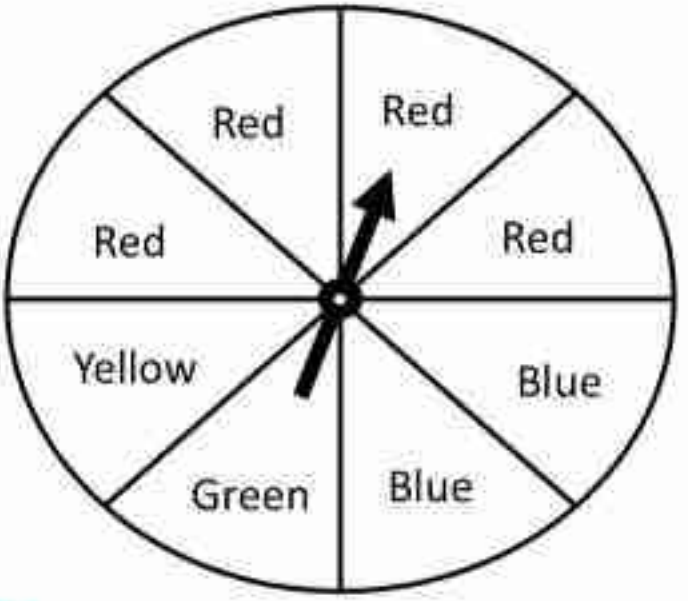
Name: _____ 127

Curriculum Connection
D2.1

Describing the Likelihood of Events

Spinner

The spinner has different coloured parts on it. When you spin the arrow, it will land on one of the colours. The likelihood of landing on a green part is unlikely.



Questions Use these terms to describe the likelihood: impossible, less likely, more likely, certain.

1. What is the likelihood of landing on a red part?	
2. What is the likelihood of landing on a blue part?	
3. What is the likelihood of landing on a yellow part?	
4. What is the likelihood of landing on a red or yellow part?	
5. What is the likelihood of landing on a red, blue, green, or yellow part?	
6. What is the likelihood of landing on a purple part?	

Name: _____ 131

Curriculum Connection
D2.2

Predicting Survey Results – Food - Class

When we do a survey, we can predict what the results will be based on who we ask. The people we survey are called the population. If you ask adults the same question that you ask kids, you will probably be able to predict different survey results. Try it below!

Predict What do you predict will be the results of the survey

1) Write what you think the results will be if you asked 10 students in your class the question: "What is your favourite food?"

Survey Question : What is your favourite food?

Categories			Steak	Fish	Sandwiches
Frequency					

2) Complete the survey by asking 10 classmates

Survey Question : What is your favourite food?

Categories	Pizza	Hot Dog	Steak	Fish	Sandwiches
Tally					
Frequency					

Results How were your predictions?

Were your predictions accurate or not? What surprised you?

Name: _____ 132

Curriculum Connection
D2.2

Predicting Survey Results – Food - Adults

Predict What do you predict will be the results of the survey

1) Write down what you think the results will be if you asked 10 different adults the survey question, "What is your favourite food?"

Survey Question : What is your favourite food?

Category	Pizza	Hot Dog	Steak	Fish	Sandwiches
Frequency					

2) Complete the survey by asking 10 different adults.

Survey Question : What is your favourite food?

Categories	Pizza	Hot Dog	Steak	Fish	Sandwiches
Tally					
Frequency					

Results How was your prediction?

1) Were your predictions accurate or not? What surprised you?

2) Why do you think you got different results when you asked adults?

Name: _____ 133

Curriculum Connection
D2.2

Predicting Survey Results – Drink - Class

Predict What do you predict will be the results of the survey

1) Write down what you think the results will be if you asked 10 students in your class the survey question: "What is your favourite drink?"

Survey Question : What is your favourite drink?

Category	Water	Juice	Tea	Pop	Coffee
Frequency					

2) Complete the survey by asking your classmates.

Survey Question : What is your favourite drink?

Categories	Water	Juice	Tea	Pop	Coffee
Tally					
Frequency					

Results How was your prediction?

1) Were your predictions accurate or not? What surprised you?

2) If you asked adults the same question, which two drinks do you think will be the most popular?

Name: _____ 134

Curriculum Connection
D2.2

Predicting Survey Results – Drink - Adults

Predict What do you predict will be the results of the survey

1) Write down what you think the results will be if you asked 10 different adults the survey question, "What is your favourite drink?"

Survey Question : What is your favourite drink?

Category	Water	Juice	Tea	Pop	Coffee
Frequency					

2) Complete the survey by asking different adults.

Survey Question : What is your favourite drink?

Categories	Water	Juice	Tea	Pop	Coffee
Tally					
Frequency					

Results How was your prediction?

1) Were your predictions accurate or not? What surprised you?

2) Why do you think you got different results when you asked adults?

Name: _____ 137

Unit Quiz - Probability

Part 1 Circle the likelihood of the event happening

1) You will see a unicorn today.

Certain
Likely
Equally Likely
Unlikely
Impossible

2) It will get dark tonight

Certain
Likely
Equally Likely
Unlikely
Impossible

3) You[illegible]g will[illegible]lish

Certain
[illegible]ely
[illegible]
Impossible

4) You will eat chocolate today.

Certain
Likely
Equally Likely
Unlikely
Impossible

5) You will see a truck today.

Certain
Likely
Equally Likely
Unlikely
Impossible

6) [illegible]ll ra[illegible]ow today.

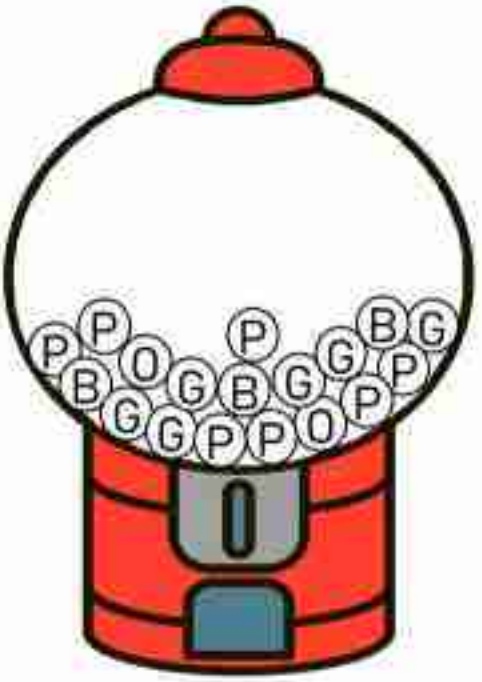
Certain
[illegible]Likely
[illegible]ely
[illegible]
[illegible]ible

Part 2 Use these terms to describe the likelihood: impossible, unlikely, equally likely, likely, certain

1. What is the likelihood of you rolling a 6?	
2. What is the likelihood of you rolling a 0?	
3. What is the likelihood of you rolling a 1, 2, 3, or 4?	
4. What is the likelihood of you rolling an even number?	

Gumball Machine

There are 18 gumballs in a machine. What is the likelihood of you pulling out a red (R), yellow (Y), green (G), or blue (B) gumball?



Frequency Table Fill in the frequency table below

Mar Colour	Frequency
Orange	
Gre	

Questions Use these t escri elihood: impossible, less likely, equally likely, l ely

1. What is the likelihood of pulling out a pink all?	
2. What is the likelihood of pulling out a green gumbal	
3. What is the likelihood of pulling out a pink or green gumball?	
4. What is the likelihood of pulling out a blue or orange gumball?	
5. What is the likelihood of pulling out a blue, pink, orange, or green gumball?	
6. What is the likelihood of pulling out a red gumball?	

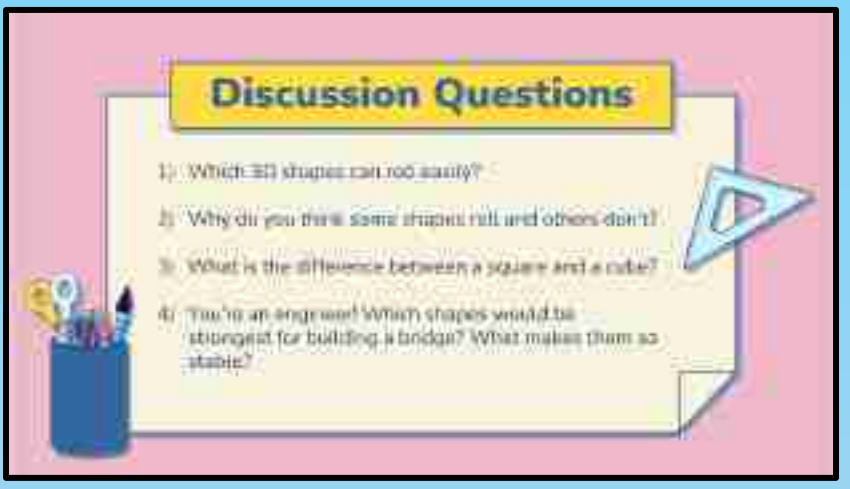
Google Slides Lessons Preview

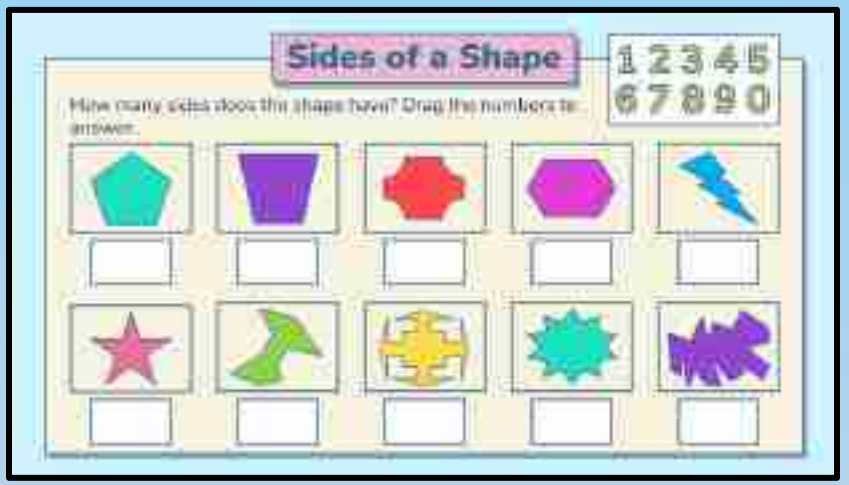
Ontario Math Curriculum
Spatial Sense Unit – Grade 3

3-Part Lesson Format

Part 1 – Minds On!

- Learning Goals
- Discussion Questions
- Why Math is Important
- And More!



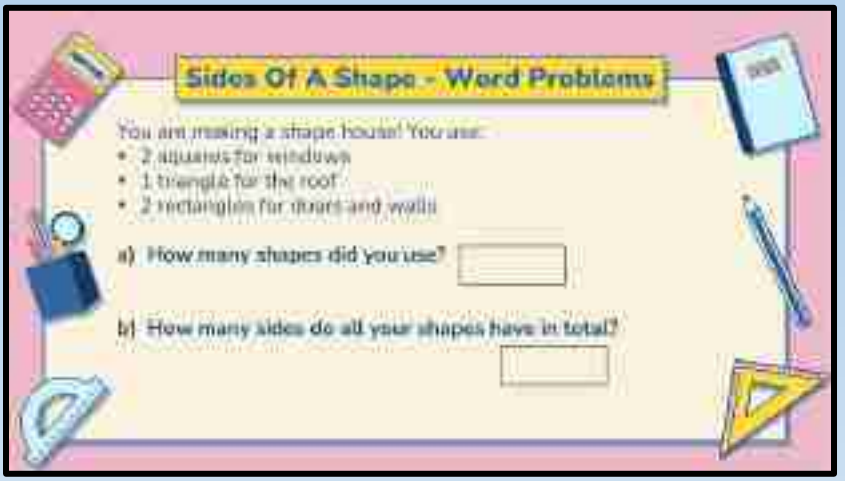


Part 2 – Action!

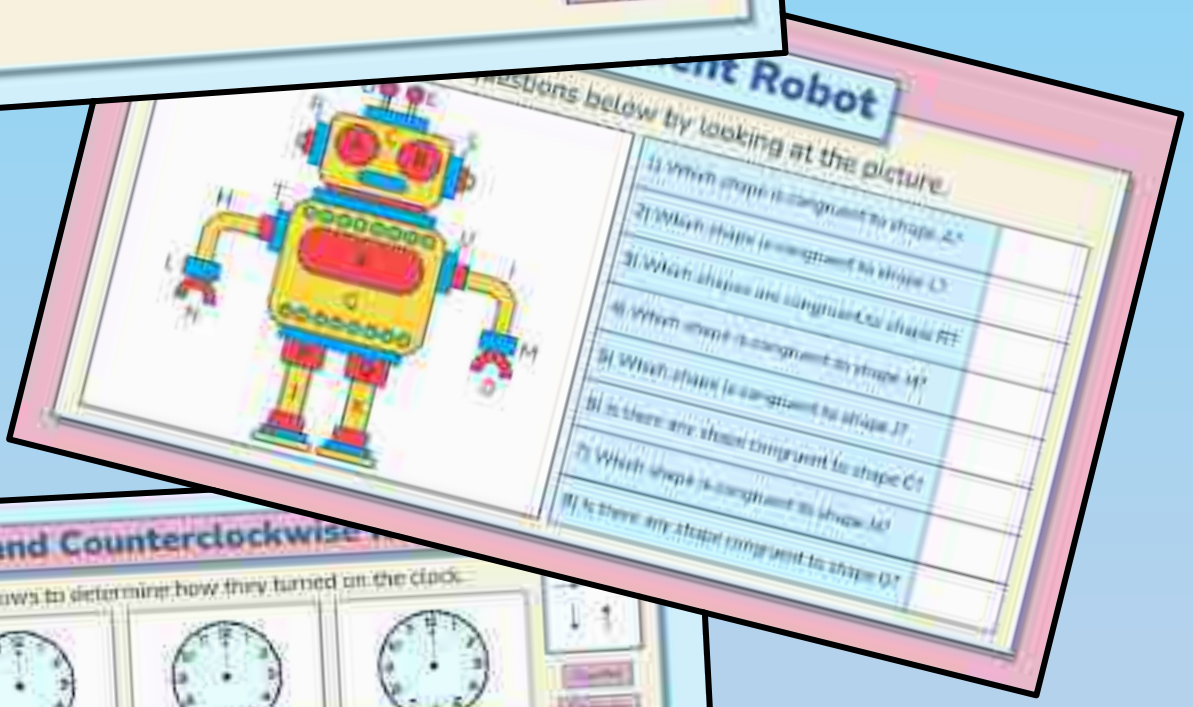
- Questions
- Matching
- Drag and Drop
- Videos
- And More!

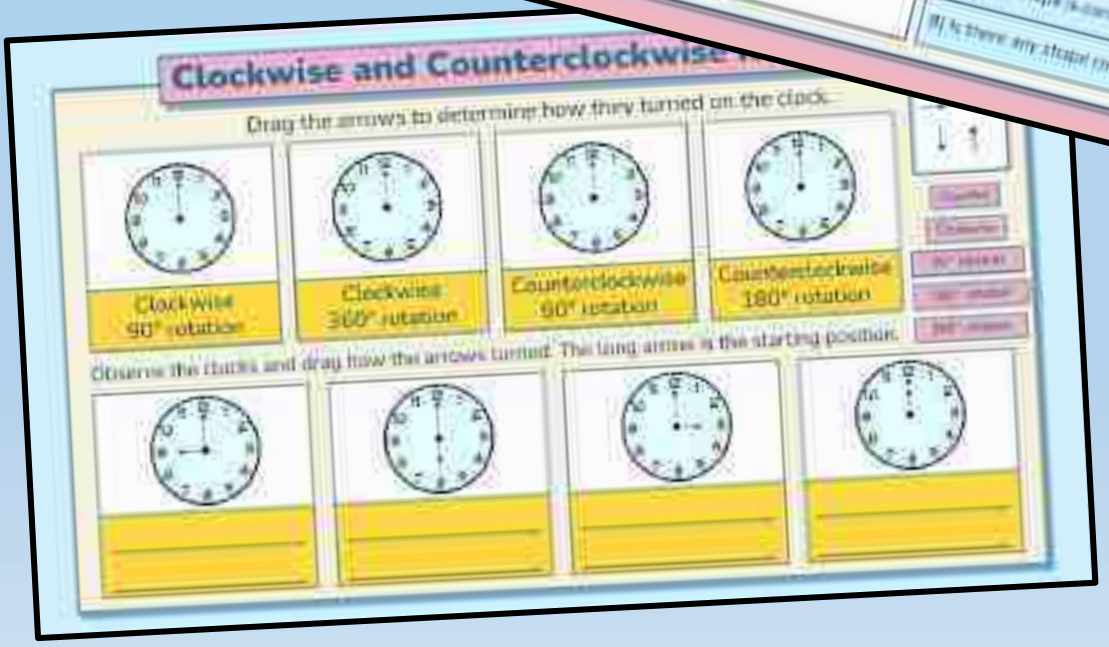
Part 3 – Consolidation!

- Exit Cards
- Word Problems
- Quizzes
- Student Created Quizzes



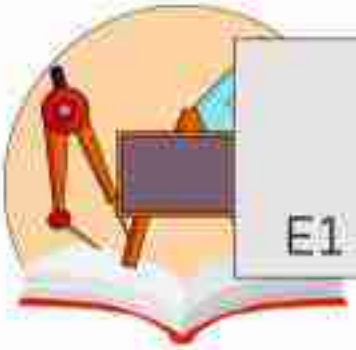
Ontario Math Curriculum
Spatial Sense Unit – Grade 3





Ontario Math Curriculum
Spatial Sense Unit – Grade 3

Workbook Preview



Grade 3

E1 – Geometric and Spatial Reasoning

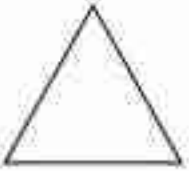
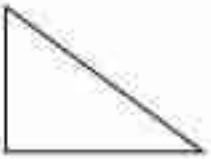
	Curriculum Expectations	Pages That Cover the Expectations
E1.1	sort, construct, and identify cubes, prisms, pyramids, cylinders, and cones by comparing their faces, edges, vertices, and angles	4 – 33, 39 – 52
E		
E1.3	identify congruent lengths, angles, and faces of three-dimensional objects by mentally and physically matching them, and determine if the objects are congruent	23, 25, 53 – 60
E1.4	give and follow multistep instructions involving movement from one location to another, including distances and half- and quarter-turns	61 - 74

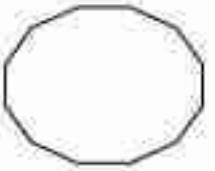
Name: _____ 4

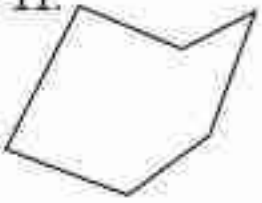
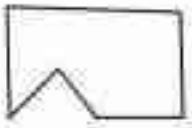
Curriculum Connection
S13

Sides of a Shape

Part 1 How many sides does the shape have?

1.	2.	3.	4.	5.
				
_____	_____	_____	_____	_____

6.	8.	9.	10.
			
_____	_____	_____	_____

11.	12.	13.	14.	15.
				
_____	_____	_____	_____	_____

Part 2 Draw a shape with the correct number of sides

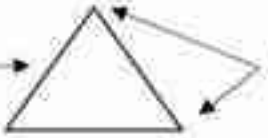
1)	2)	3)	4)	5)
4	3	6	8	10

Name: _____ 6

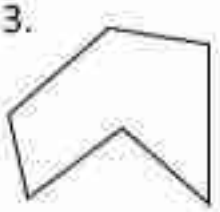
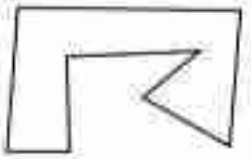
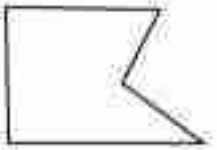
Curriculum Connection
S13

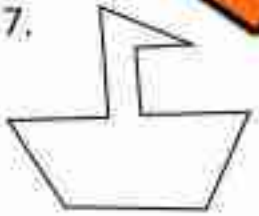
Sides and Vertices

Reminder: Side → Vertices



Part 1 How many sides and vertices does the shape have?

1.	2.	3.	4.	5.
				
_____ sides	_____ sides	_____ sides	_____ sides	_____ sides
_____ vertices	_____ vertices	_____ vertices	_____ vertices	_____ vertices

6.	7.	8.	9.	10.
				
_____ sides	_____ sides	_____ sides	_____ sides	_____ sides
_____ vertices	_____ vertices	_____ vertices	_____ vertices	_____ vertices

Part 2 Draw a shape with the correct number of vertices and sides

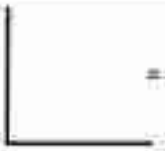
1.	2.	3.	4.	5.
3 sides	4 sides	5 sides	6 sides	7 sides
3 vertices	4 vertices	5 vertices	6 vertices	7 vertices

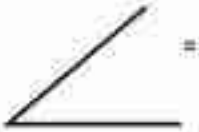
Name: _____ 12

Curriculum Connection
S13

Naming Angles

 = larger than a right angle

 = right angle

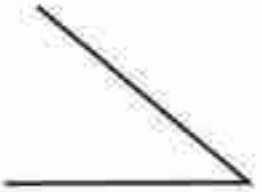
 = smaller than a right angle

Questions Label the angles in comparison to a right angle – larger, smaller, right angle

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8)

9) 

10) 

11) 

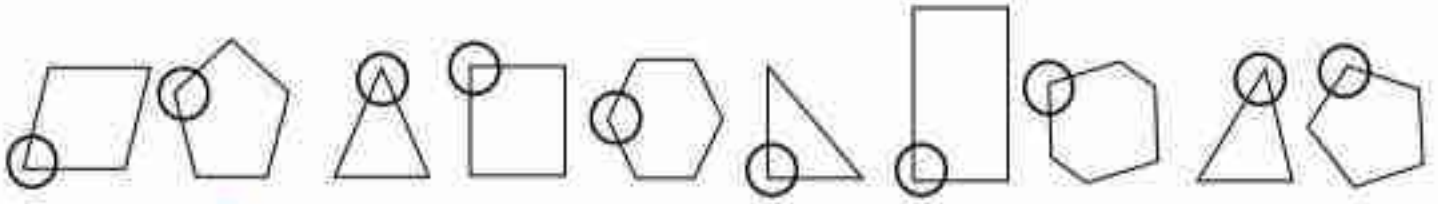
12) 

Name: _____ 14

Curriculum Connection
S13

Sorting Angles

Part 1 Sort the angles into the categories below



A C D E F G H I J

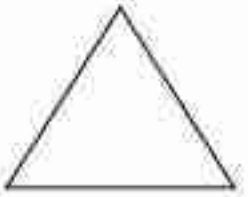
Angles	Right Angle	Larger than a right angle	Smaller than a right angle
Letters			

Part 2 Sort the angles into the categories below

A B C D G H

Angles	Right Angle	Larger than a right angle	Smaller than a right angle
Letters			

Part 3 Circle the angles below

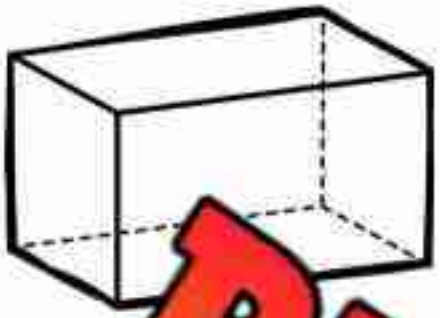
Drawings			
Angles	Right Angle	Larger than a right angle	Smaller than a right angle

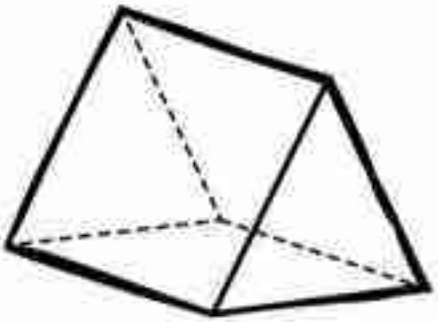
Name: _____ 16

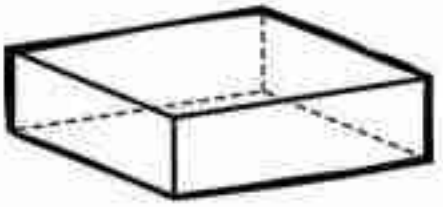
Curriculum Connection
S13

Prisms - Faces, Edges, Vertices

Questions Fill in the tables below based on the prisms



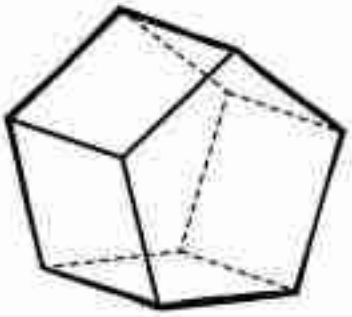


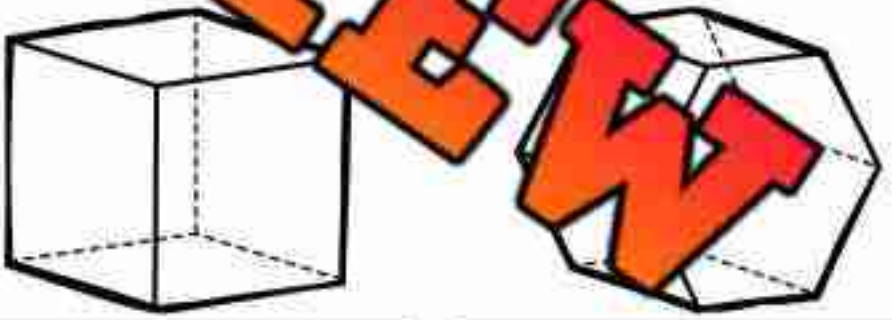


Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	





Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

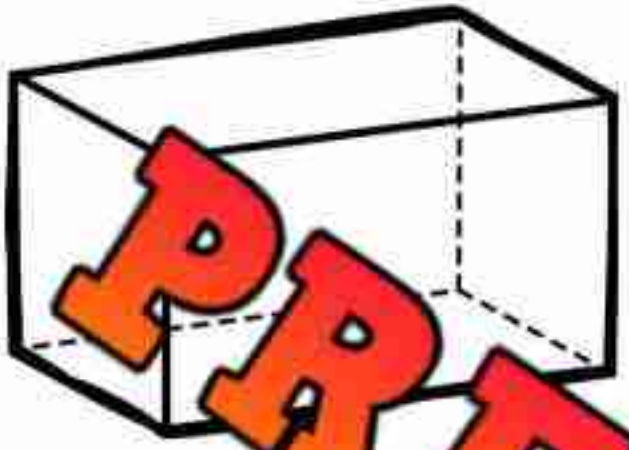
Faces	
Edges	
Vertices	
Name	

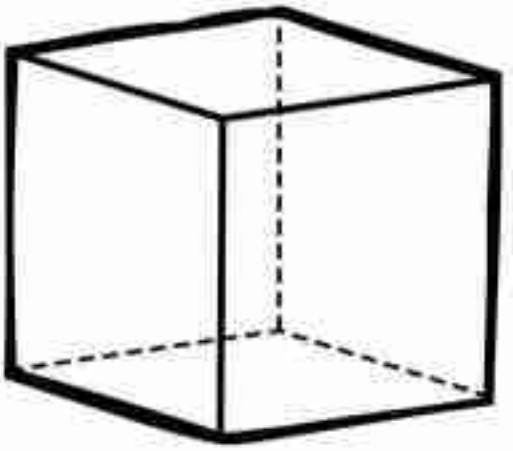
Name: _____ 18

Curriculum Connection
S13

3D Shapes - Cube vs Rectangular Prism

Questions How is a cube similar and different from a rectangular prism?





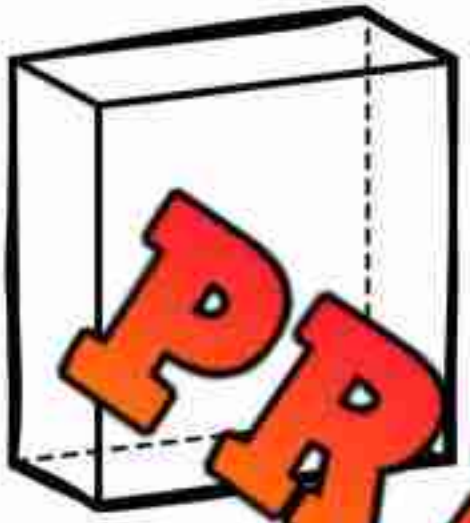
Ideas	ertices, 2D Shapes
Similarities	
Differences	

Name: _____ 19

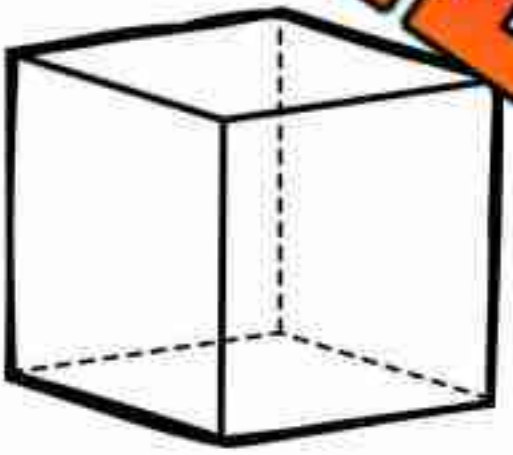
Curriculum Connection
3.13

3D Shapes - Cube vs Rectangular Prism

Questions Fill in the tables below for the cube and rectangular prism



Name	
Faces	
Edges	
Vertices	
2D Shapes	



Edge	
Vertices	
2D Shapes	

1) How are cubes and rectangular prisms similar?

_____

_____

2) How are cubes and rectangular prisms different?

_____

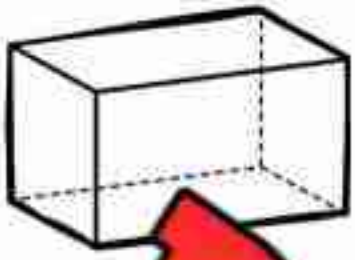
_____

Name: _____ 20

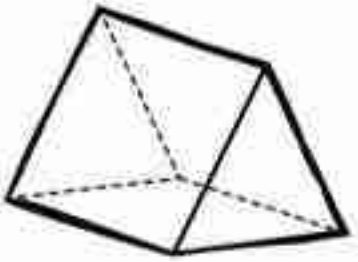
Curriculum Connection
S13

Naming Prisms

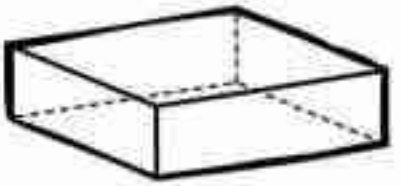
Questions Circle the name of the prism



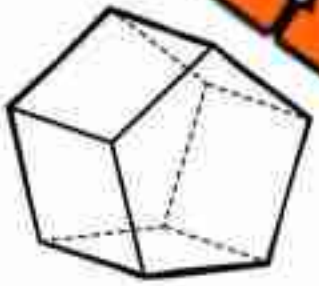
Rectangular Prism
Triangular Prism



Rectangular Prism
Triangular Prism

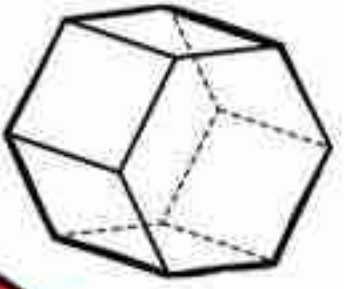


Rectangular Prism
Triangular Prism

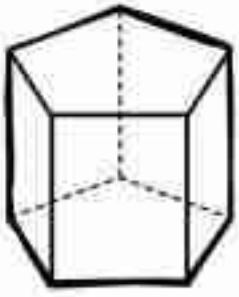


Rectangular Prism
Triangular Prism
Pentagonal Prism

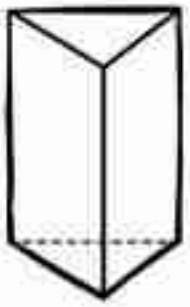
Cube
Hexagonal Prism
Pentagonal Prism



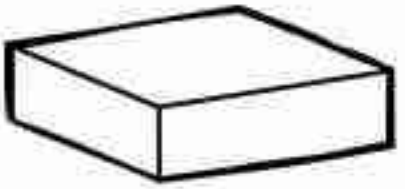
ngular Prism
onal Prism



Rectangular Prism
Hexagonal Prism
Pentagonal Prism



Rectangular Prism
Triangular Prism
Pentagonal Prism



Rectangular Prism
Hexagonal Prism
Pentagonal Prism

Name: _____ 22

Curriculum Connection
S13

3D Shapes - Prisms

Questions Draw the following prisms

Faces	6
Edges	12
Vertices	
Name	Rectangular Prism

Faces	5
Edges	9
Vertices	6
Name	Triangular Prism

Faces	7
Edges	15
Vertices	10
Name	Pentagonal Prism

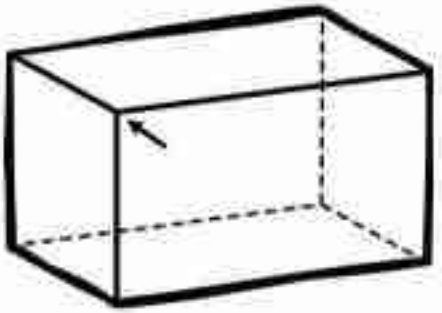
Faces	8
Edges	18
Vertices	12
Name	Hexagonal Prism

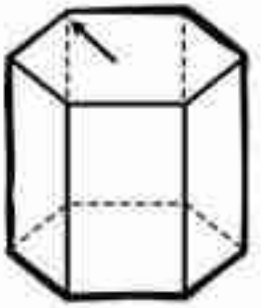
Name: _____ 23

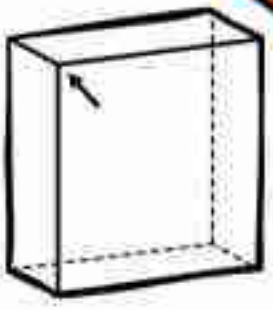
Curriculum Connection
E1.1, E1.2

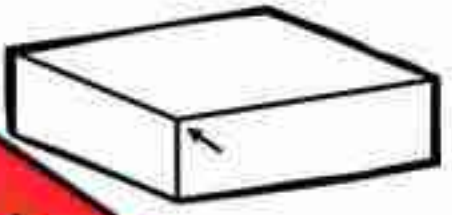
Angles in 3D Objects - Prisms

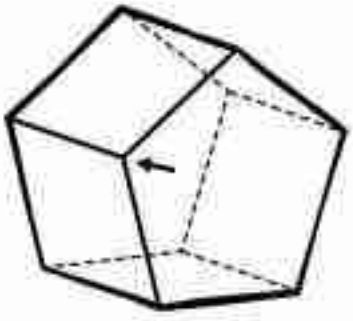
Questions Are the angles right angles, or larger or smaller than right angles?

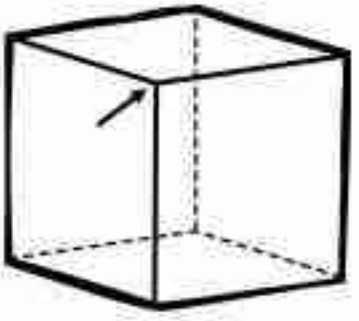


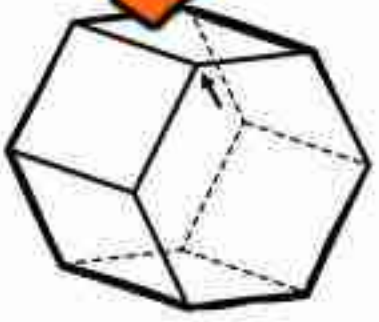












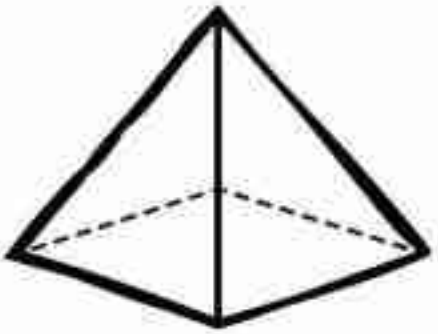
Name: _____ 24

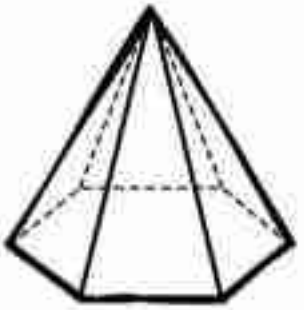
Curriculum Connection
S13

Faces, Edges, and Vertices

Questions

Fill in the tables below based on the 3D shapes below

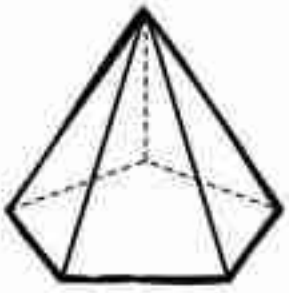




Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

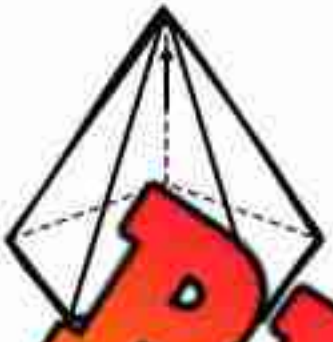
Faces	
Edges	
Vertices	
Name	

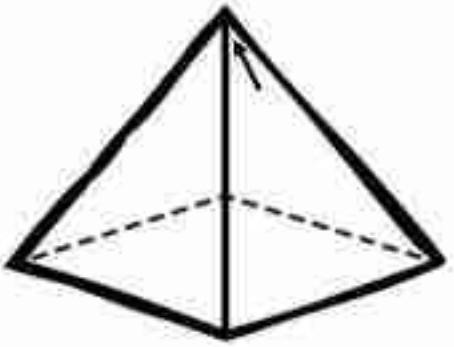
Name: _____ 25

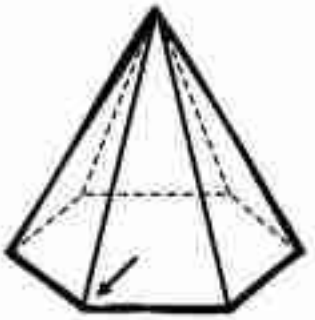
Curriculum Connection
E1.1, E1.2

Angles in 3D Objects - Pyramids

Part 1 Are the angles right angles, or are they larger or smaller than right angles?



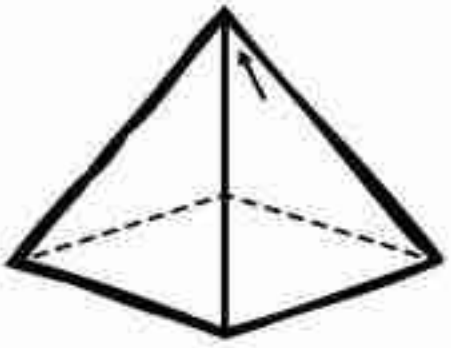


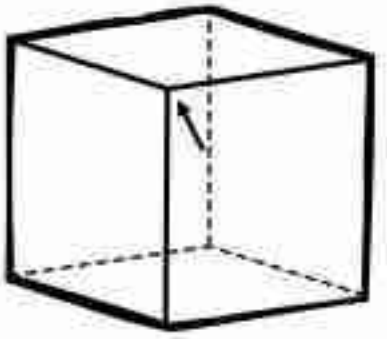


Part 2 Answer the question.

1) Are the angles at the top of a pyramid larger than 90 degrees or smaller?

2) How are prisms and pyramids different? Explain by comparing.





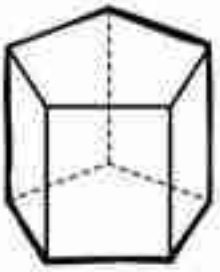
Name: _____ 26

Curriculum Connection
S13

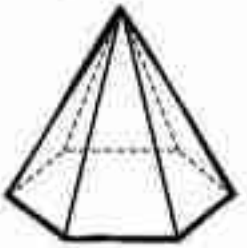
Prism, Cone, or Pyramid?

Questions Is the shape a prism, cone or pyramid?

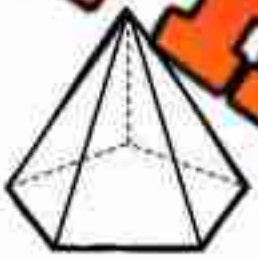
Prism Cone Pyramid



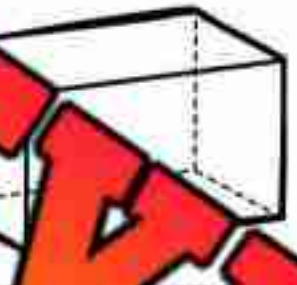
Prism Cone Pyramid



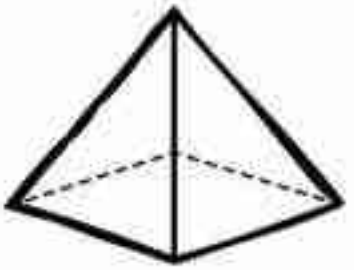
Prism Cone Pyramid



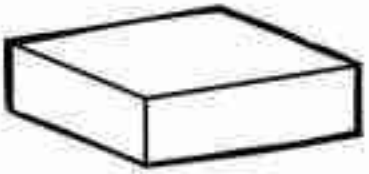
Prism Cone Pyramid



Prism Cone Pyramid



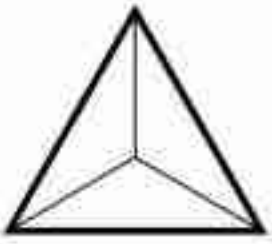
Prism Cone Pyramid



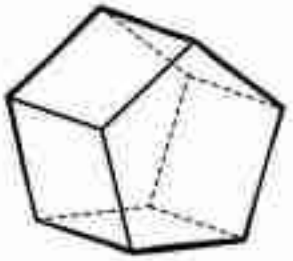
Prism Cone Pyramid

Prism Cone Pyramid

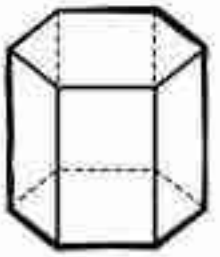
Prism Cone Pyramid



Prism Cone Pyramid



Prism Cone Pyramid



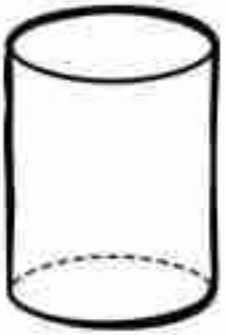
Prism Cone Pyramid

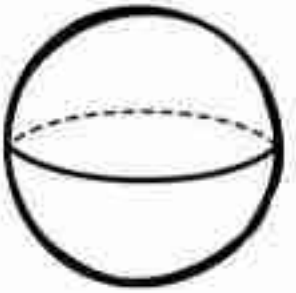
Name: _____ 29

Curriculum Connection
3.1.3

3D Shape - Faces, Edges, Vertices

Questions Fill in the tables below

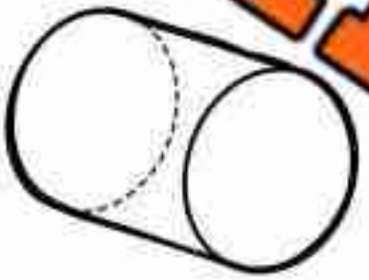




Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	



Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

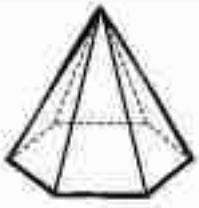
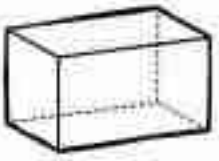
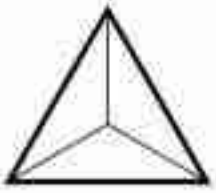
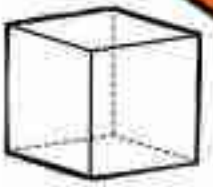
Name: _____ 33

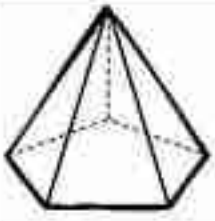
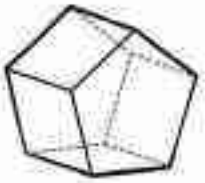
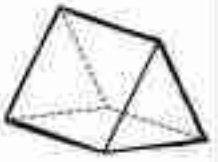
Curriculum Connection
3.13

Sorting 3D Objects - Prisms and Pyramids

Prism	Pyramid

Questions Write the letter below each shape in the correct category

					
A	B	C	D	E	F

					
G	H	I	J	K	L

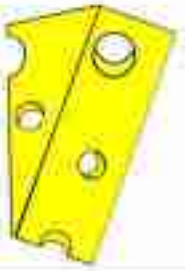
Name: _____ 35

Curriculum Connection
S1.2

2D Shapes Found in 3D Objects

Questions Circle the 2D shapes found in the 3D shape

3D Shape	2D Shape 1	2D Shape 2	2D Shape 3
			
			
			
			
			

3D Shape	2D Shape 1	2D Shape 2	2D Shape 3
			
			
			
			
			

Name: _____ 36

Curriculum Connection
S1.2

Finding Shapes in our Lives

Questions Circle the shapes in the pictures below and write their names below

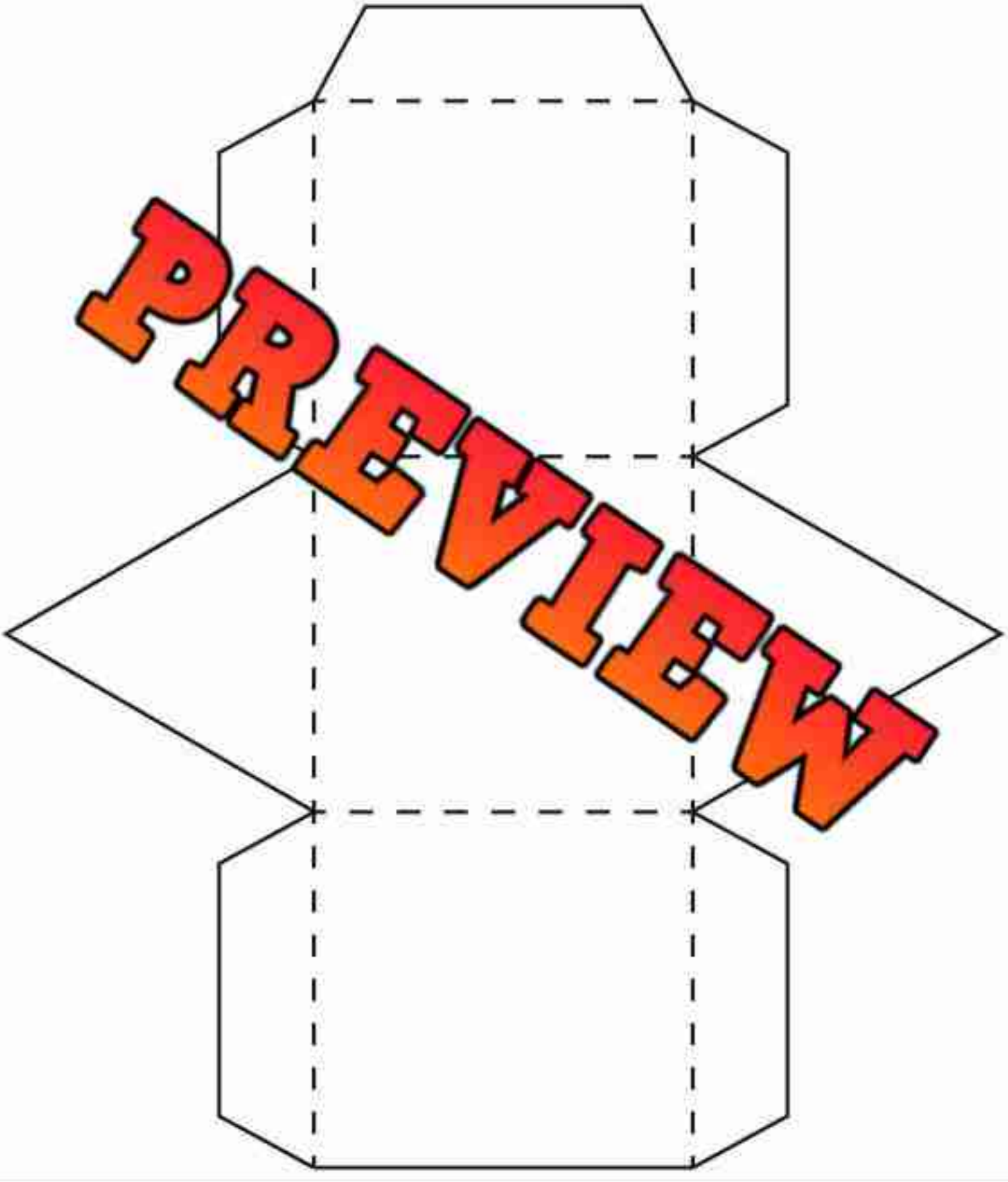
Word Bank

Pyramid Prism Triangle Square Pentagon Hexagon Cube Cone Cylinder Sphere

Name: _____ 39

Curriculum Connection
S13

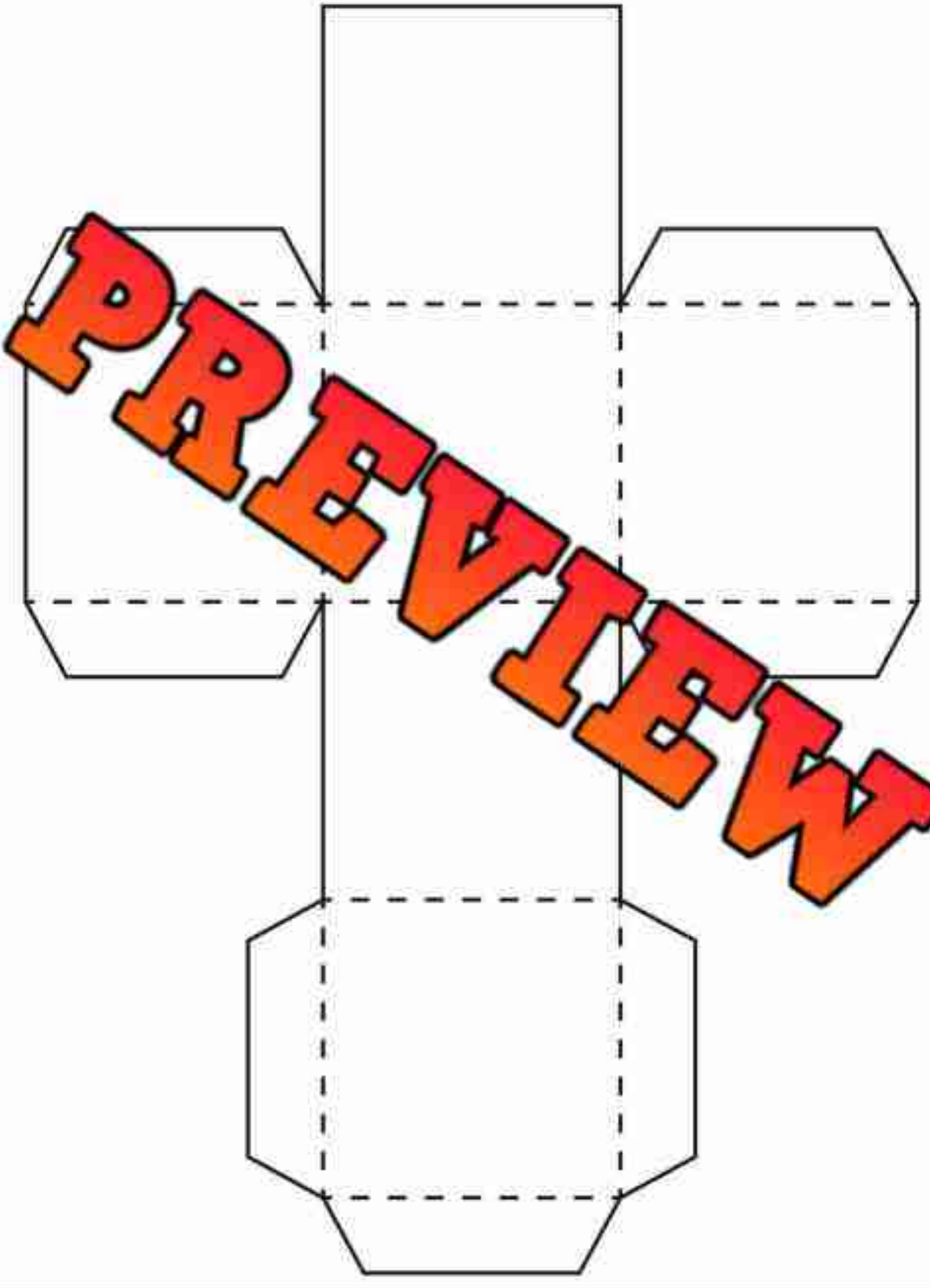
3D Model - Triangle Based Prism Net



Name: _____ 41

Curriculum Connection
S13

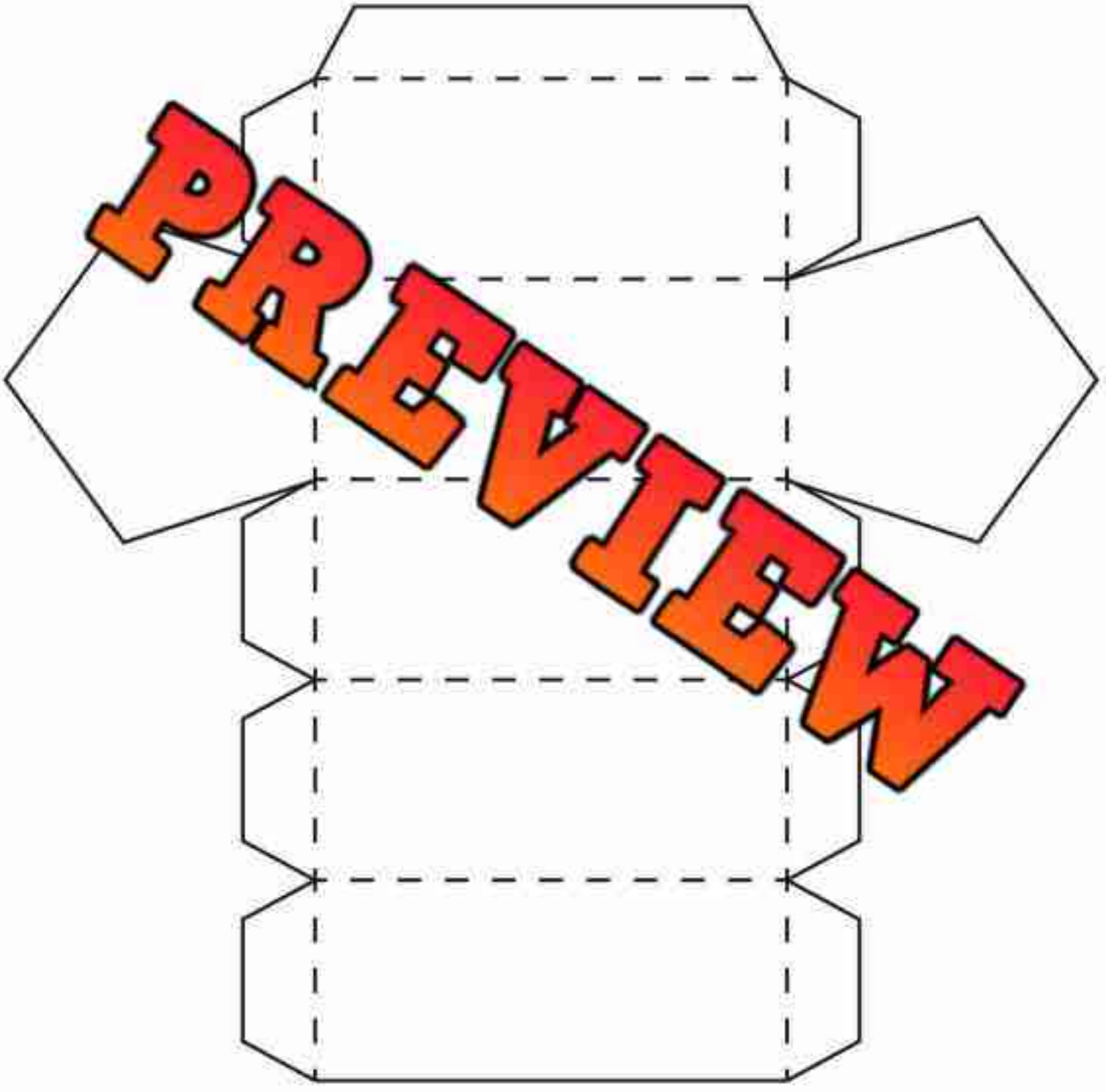
3D Model - Cube Net



Name: _____ 42

Curriculum Connection
S13

3D Model - Pentagon Based Prism Net



Name: _____ 43

Curriculum Connection
S13

3D Model - Hexagon Based Prism Net

Name: _____ 44

Curriculum Connection
S13

3D Model - Cone Net

Name: _____ 52

Curriculum Connection
S13

3D Models - Investigating Nets

Name of 3D Shape	Faces	Edges	Vertices

Name: _____ 57

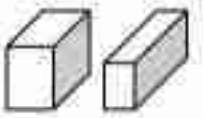
Curriculum Connection
S1.3

Congruent Shapes

Questions Colour the congruent shapes. There may be more than one answer.

Congruent shapes have the same size and shape. This means that the sides lengths and angles are the same. Congruent Shapes can be in different positions.

Congruent



Not congruent

1)	a)	b)	c)
2)	a)	b)	c)
3)	a)	b)	c)
4)	a)	b)	c)
5)	a)	b)	c)
6)	a)	b)	c)
7)	a)	b)	c)

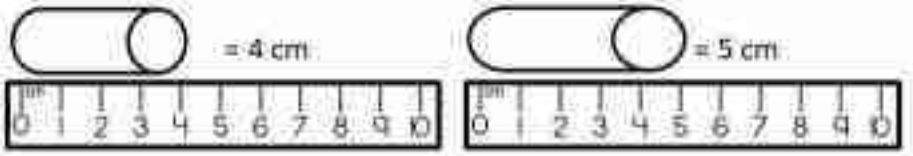
Name: _____ 58

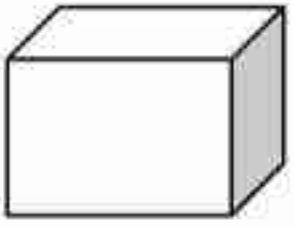
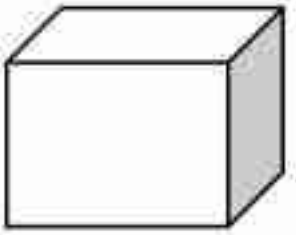
Curriculum Connection
S1.3

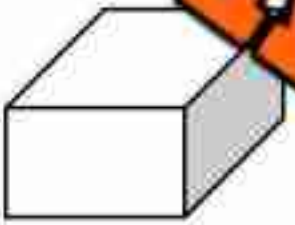
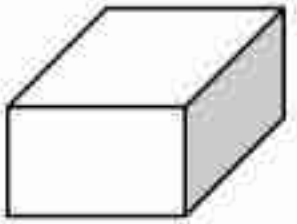
Congruent Shapes

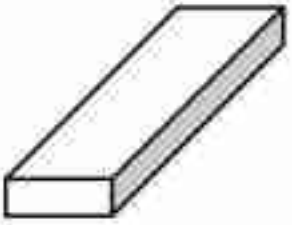
Questions Measure the side lengths and circle the congruent shape

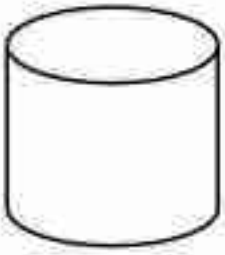
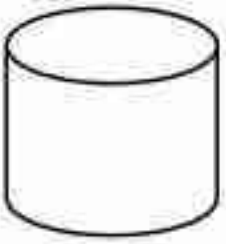
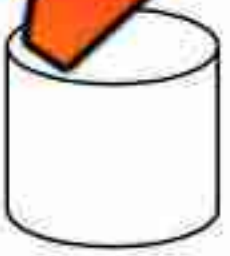
Measure each of the side lengths to make sure they are the same.

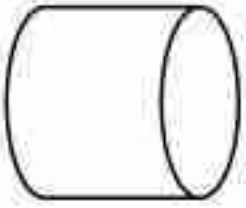
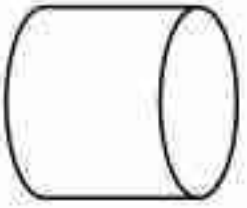
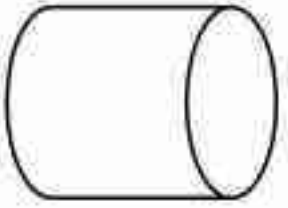


1)  a)  b) 

2)   b) 

3)  a) 

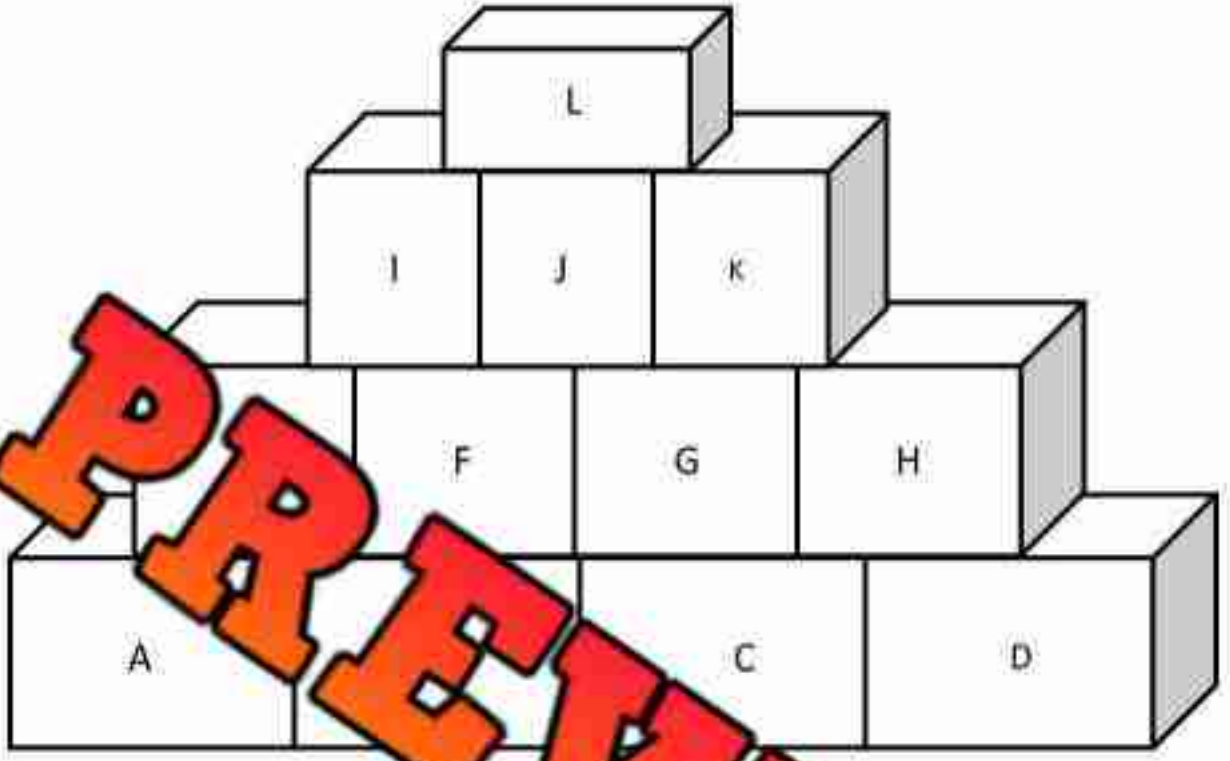
4)  a)  b) 

5)  a)  b) 

Name: _____ 59

Curriculum Connection
5.1.3

Congruent Block Pryamid



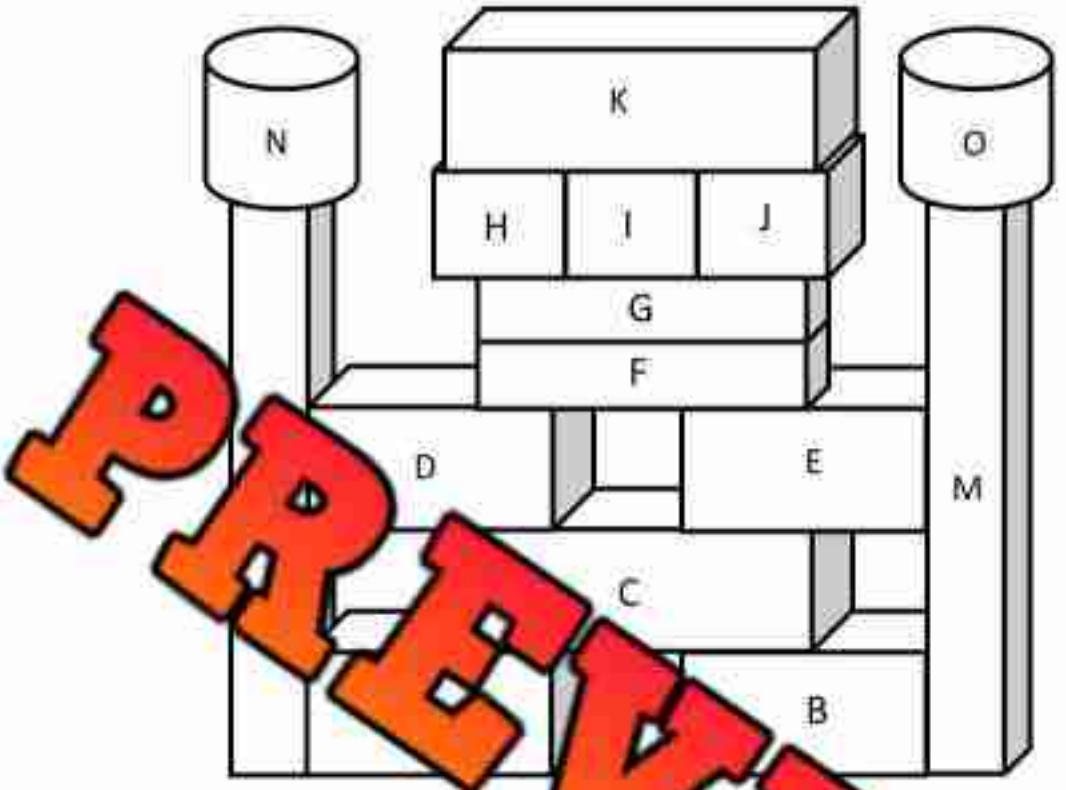
Questions Answer the que[illegible]below [illegible]t the pyramid above

1) Which shapes are congruent to A?	
2) Which shapes are congruent to shape E?	
3) Which shapes are congruent to shape I?	
4) Are any shapes congruent to shape L?	
5) Draw a congruent shape to shape L?	

Name: _____ 60

Curriculum Connection
S1.3

Congruent 2D Shape Statue



Questions

Answer the questions below about the statue above

1) Which shapes are congruent to A?	
2) Which shape is congruent to shape C?	
3) Which shapes are congruent to shape D?	
4) Which shape is congruent to shape G?	
5) Which shapes are congruent to shape H?	
6) Which shape is congruent to shape L?	
7) Which shape is congruent to shape N?	

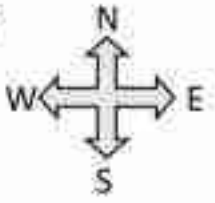
Name: _____ 61

Curriculum Connection
S1.4

Movement - Cardinal Directions

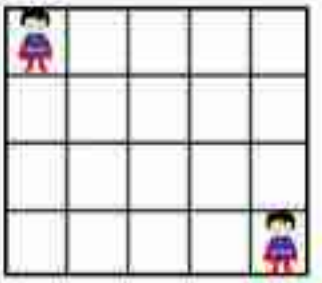
When we move something or someone from one location to another, we describe the movement using direction and distance.

Directions – north, south, east, west
Distance – steps, metres



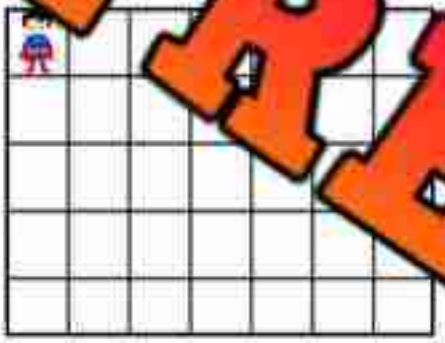
Example of movement – the child went south 3 steps, and east 4 steps.

start

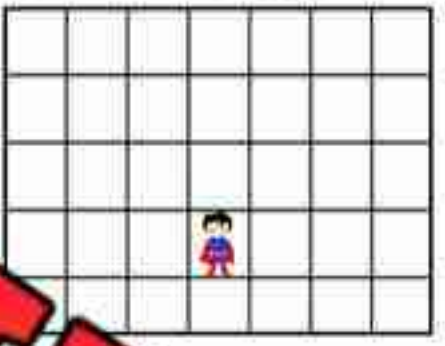


Question Put an X where you think the child will end up

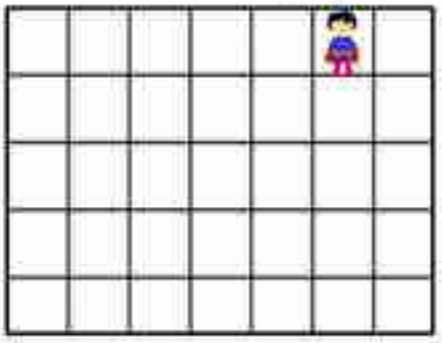
1) Dire[illegible]st 3 steps



2) Directions – north 3 steps, west 2 steps

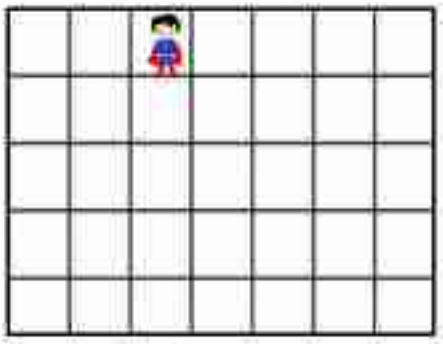


3) Directions – south 4 steps, west 4 steps

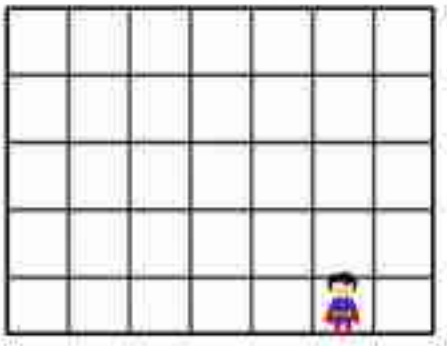


[illegible] steps, east 6 steps

5) Directions – south 3 steps, east 4 steps



6) Directions – north 2 steps, west 3 steps



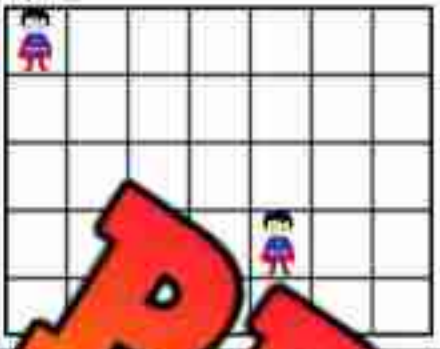
Name: _____ 63

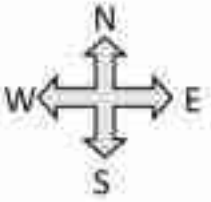
Curriculum Connection
S3.4

Describing Movement Using Cardinal Directions

Questions Describe how the child moved from the start to the end

1) start

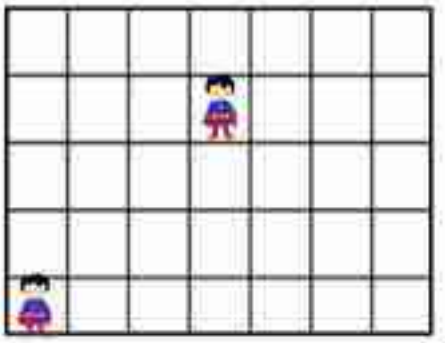




Move _____ spaces

Move _____ spaces

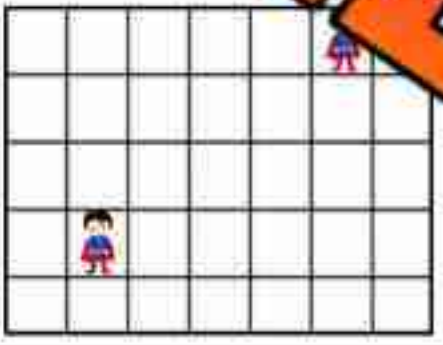
2)



Move _____ spaces

Move _____ spaces

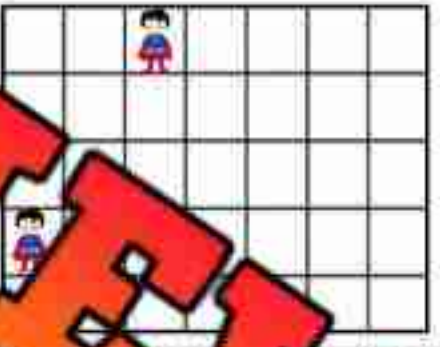
3)



Move _____ spaces

Move _____ spaces

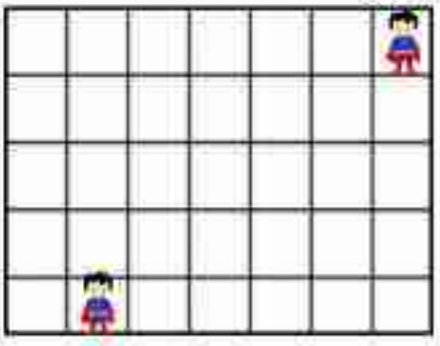
4)

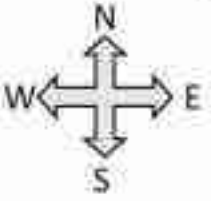


Move _____ spaces

Move _____ spaces

5) start

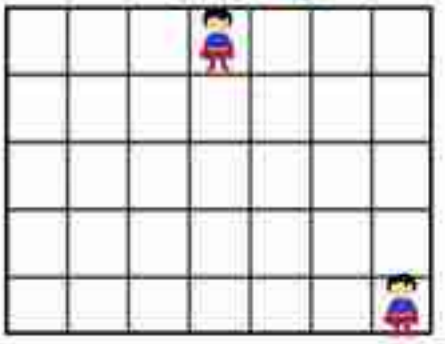




Move _____ spaces

Move _____ spaces

6) start



Move _____ spaces

Move _____ spaces

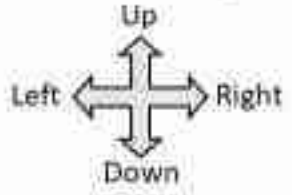
Name: _____ 64

Curriculum Connection
[illegible]

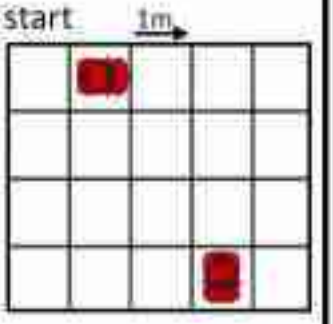
Movement - Left, Right, Down, Up

When we move something or someone from one location to another, we describe the movement using direction and distance.

Directions – left, right, down, up
Distance – steps, metres

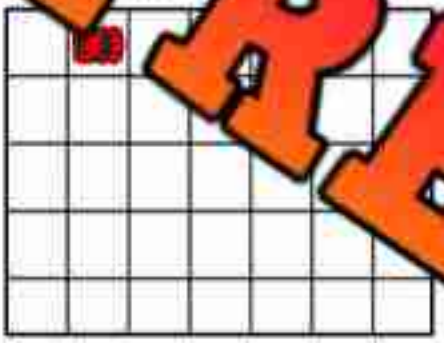


Example of movement – the car went right 2 metres, and down 3 metres.

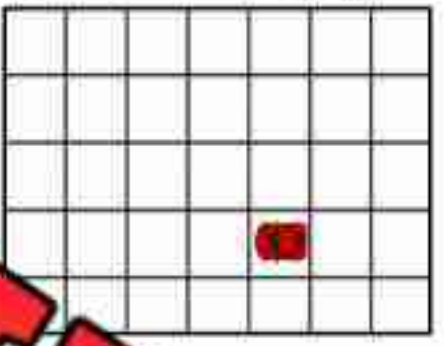


Question Put an X where you think the car will end up

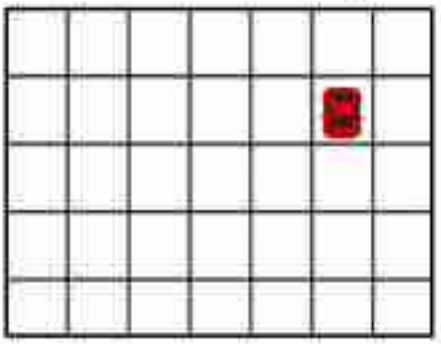
1) Directions – right 4 [illegible] down 3 metres



2) Directions – left 3 metres, up 2 metres

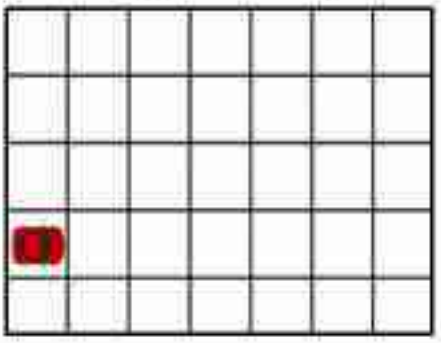


3) Directions – down 3 metres, left 4 metres

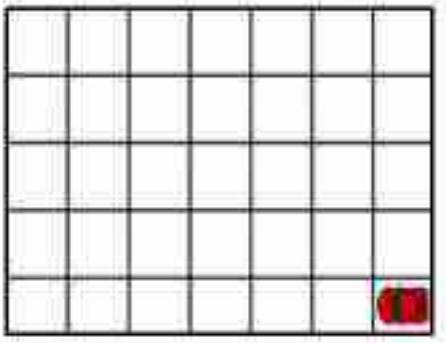


[illegible] metres, left 3 metres

5) Directions – right 6 metres, up 3 metres



6) Directions – left 5 metres, up 4 metres



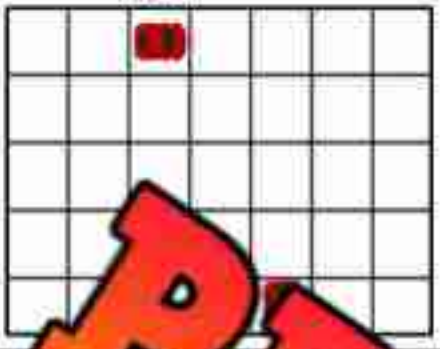
Name: _____ 66

Curriculum Connection
S3.4

Describing Movement Using Left, Right, Up, Down

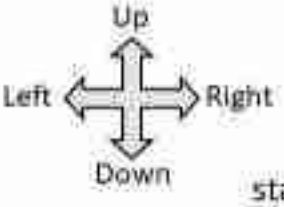
Questions Describe how the car moved from the start to the end

1)

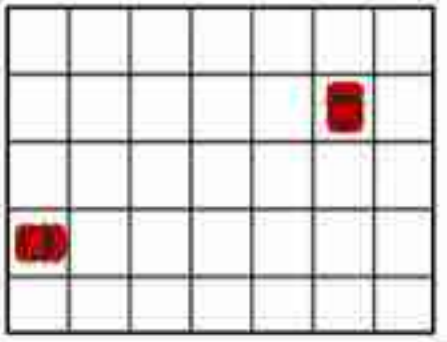


Move _____ metres

Move _____ metres



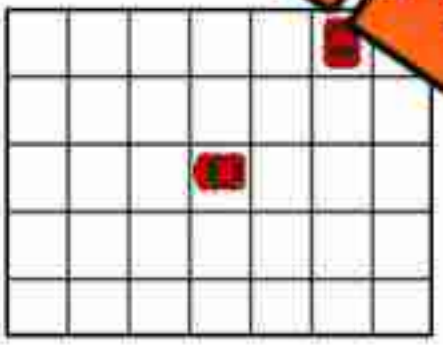
2)



Move _____ metres

Move _____ metres

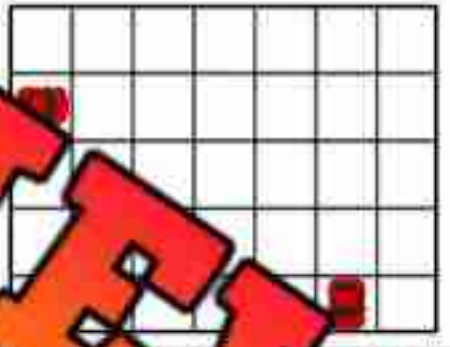
3)



Move _____ metres

Move _____ metres

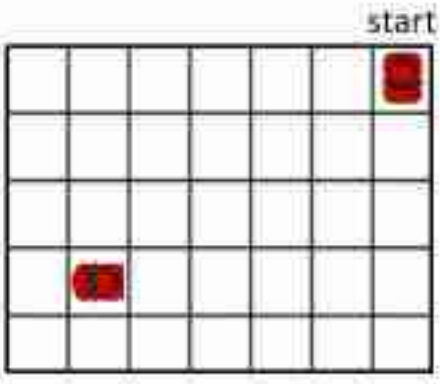
4)



Move _____ metres

Move _____ metres

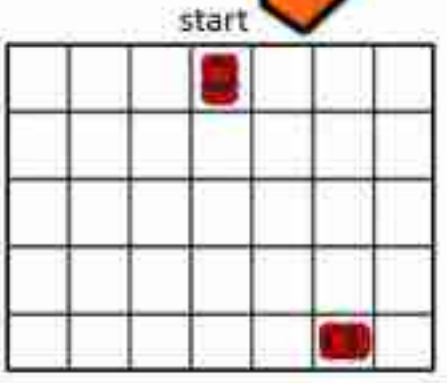
5)



Move _____ metres

Move _____ metres

6)



Move _____ metres

Move _____ metres

Name: _____ 67

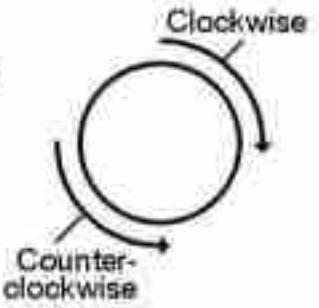
Curriculum Connection
3.3.4

Clockwise and Counterclockwise Turns

Turns can either be clockwise or counterclockwise.

A **clockwise** turn moves the same way the minute, second, and hour hands move on a clock.

A **counterclockwise** turn moves the opposite way of a clockwise turn.



We can turn things a lot or a little. Check out the three turns below.

Clockwise
Quarter Turn

wise/Counterclockwise
Half Turn

Clockwise/Counterclockwise
Full Turn

Part 1

Draw how the arro on th

1)

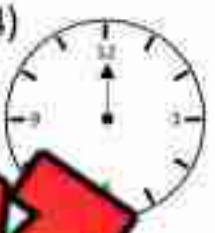
Clockwise
half turn

2)

Counterclockwise
full turn

Counterclockwise
quarter turn

4)



ockwise
quarter turn

Part 2

Describe how the arrow turned on the clock

Name: _____ 68

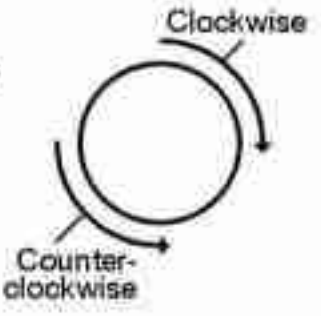
Curriculum Connection
3.3.4

Clockwise and Counterclockwise Turns

Turns can either be clockwise or counterclockwise.

A **clockwise** turn moves the same way the minute, second, and hour hands move on a clock.

A **counterclockwise** turn moves the opposite way of a clockwise turn.



We can turn things a lot or a little. Check out the three turns below.

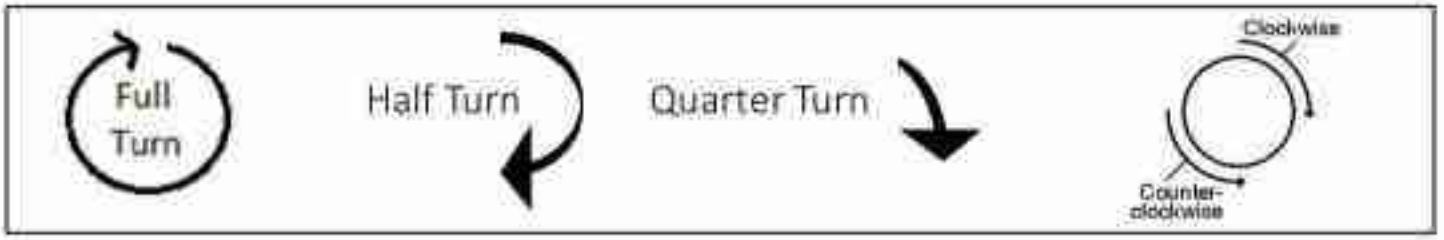
Ques …he object move? Circle the correct answer

1)			Clockwise quarter turn …lockwise half turn …erclockwise quarter turn
2)			Clo… …turn …ise h… Coun… …e quar…
3)			Clockwise quar…r tu… Clockwise half turn Counterclockwise full turn
4)			Clockwise quarter turn Clockwise half turn Counterclockwise quarter turn
5)			Clockwise quarter turn Counterclockwise quarter turn Counterclockwise half turn

Name: _____ 70

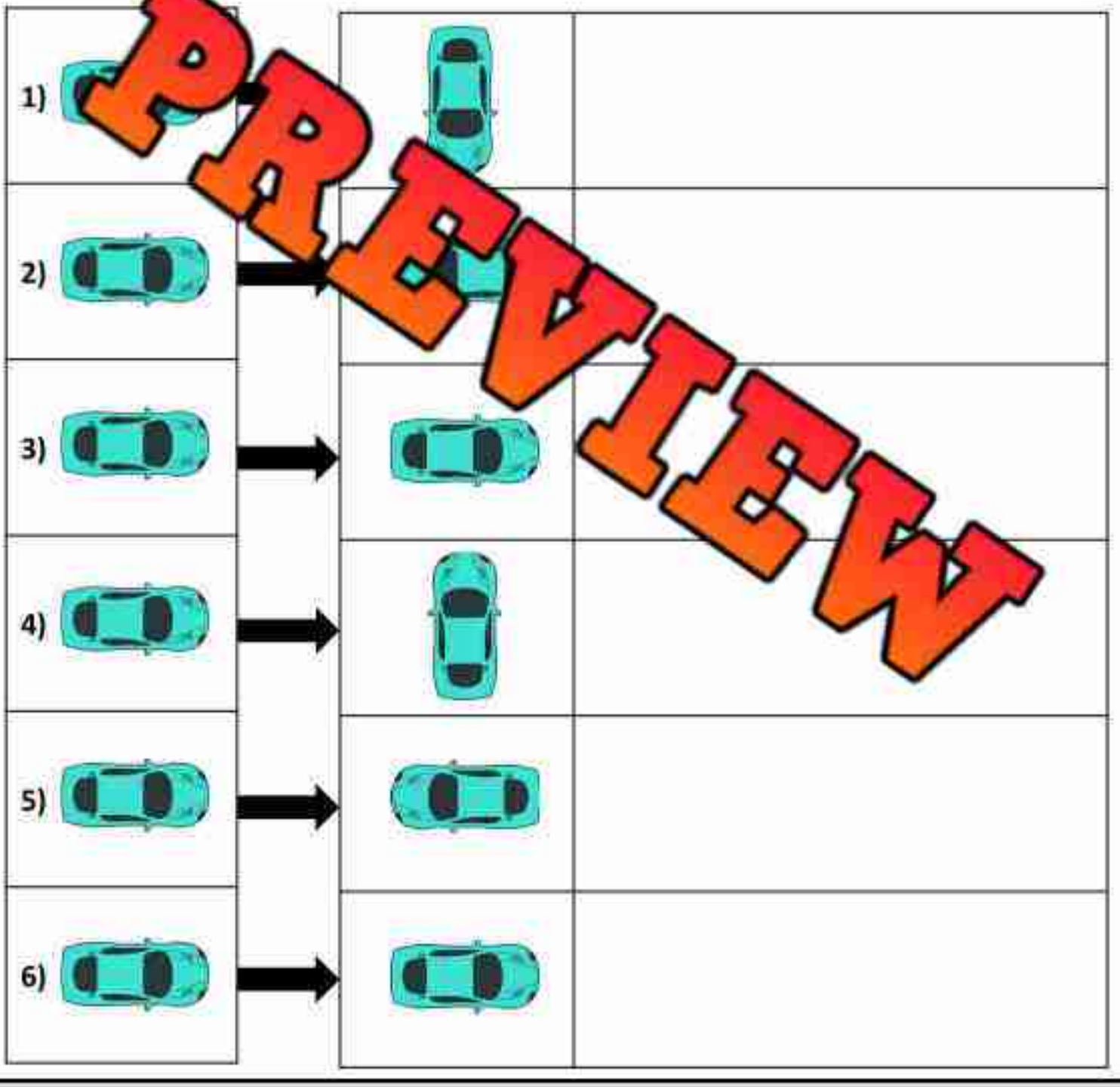
Curriculum Connection
3.3.4

Clockwise and Counterclockwise Turns



Questions

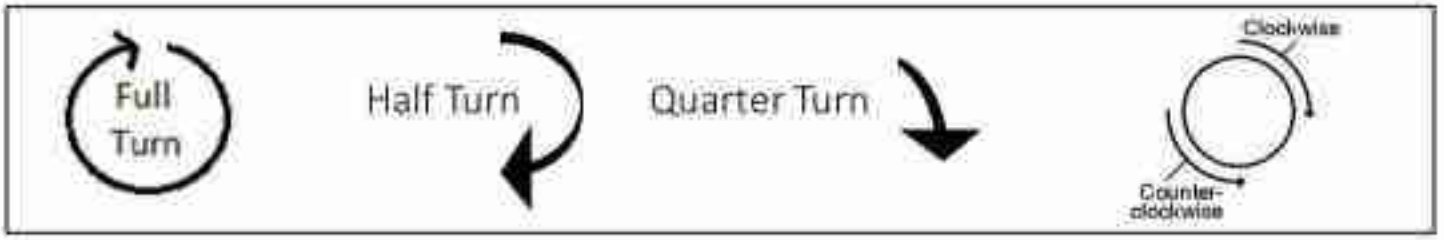
Describe how the car turned. Example – Clockwise half turn



Name: _____ 71

Curriculum Connection
3.3.4

Clockwise and Counterclockwise Turns



Questions

Draw the smiley face after it has been turned

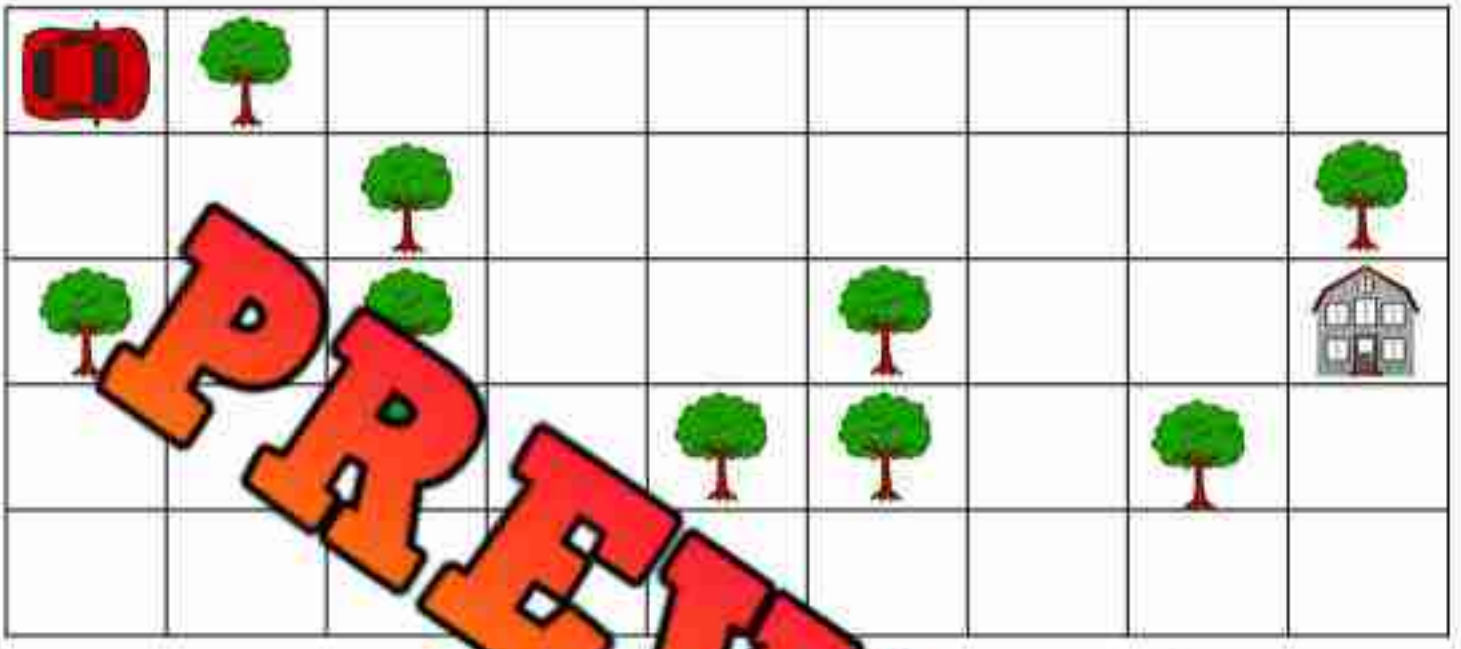
1)		Clockwise quarter turn
2)		[illegible] turn
3)		Clockwise half turn
4)		Counterclockwise half turn
5)		Clockwise full turn
6)		Counterclockwise full turn

Name: _____ 73

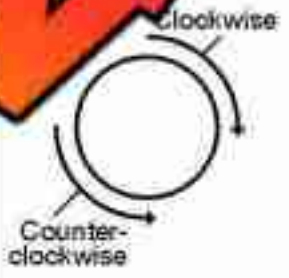
Curriculum Connection
E1.A

Self-Driving Car - Movement and Turns

Directions Write instructions that move the car around the trees and to the house



Instructio
Quarter-turn cl wise
Move forward 1 spac
Quarter-turn counter-clockwise
Move forward 1 space



Name: _____ 74

Curriculum Connection
ELA

Self-Driving Car - Movement and Turns

Direction Write instructions to move the car around

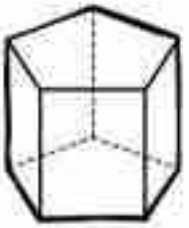
Instructions	Instructio

Name: _____ 75

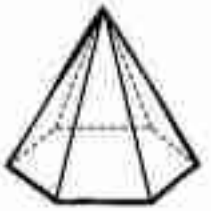
Geometry Test

Part 1 Is the shape a prism or pyramid

Prism Pyramid

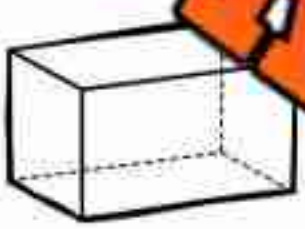


Prism Pyramid

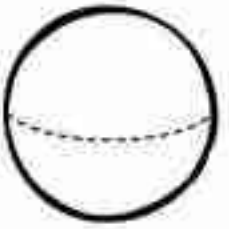


Prism Pyramid

Part n the tables below based on the prisms



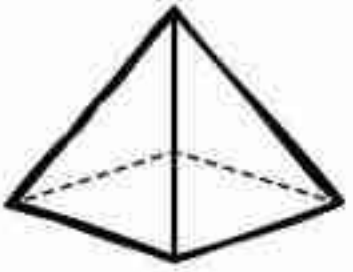
Faces	
Edges	
Vertices	
Name	



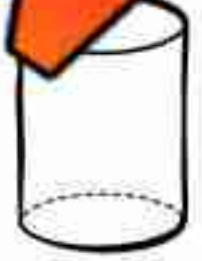
Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	

Faces	
Edges	
Vertices	
Name	



Faces	
Edges	
Vertices	
Name	

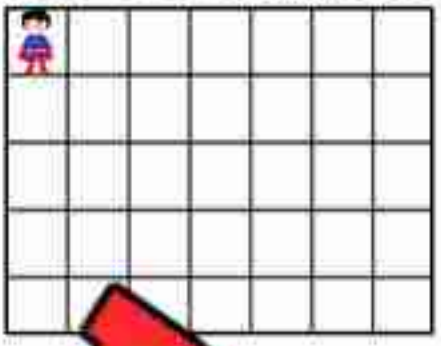


Faces	
Edges	
Vertices	
Name	

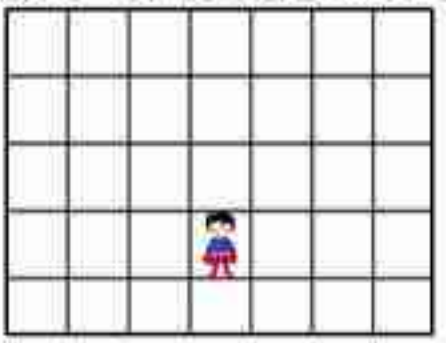
Part 4

Put an X where you think the child will end up

1) Directions – south 2 steps, east 3 steps



2) Directions – north 3 steps, west 2 steps



Part 5

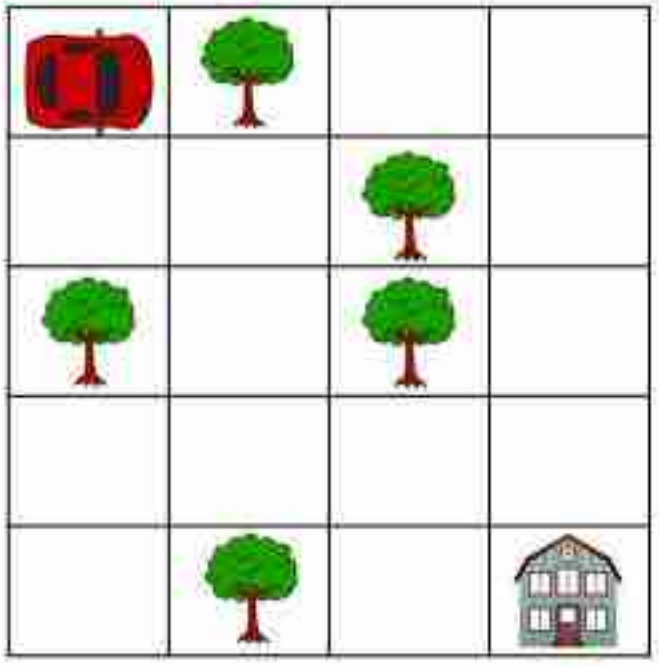
Describe how the car turned.
…le – Clockwise/counterclockwise, full/half/quarter turn

1)

2)

Part 6

Write instructions that move th… aro… …and to the house



…act…

Grade 3
E2 – Measurement

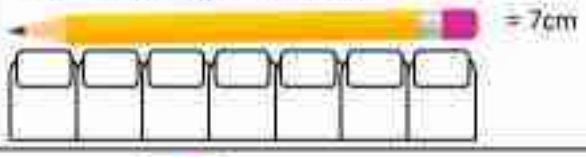
	Curriculum Expectations	Pages That Cover the Expectations
E2.1	use appropriate units of length to estimate, measure, and compare the perimeters of polygons and curved shapes, and construct polygons with a given perimeter	79 – 91, 94 - 112
E2.2	e relationships between millimetres, etres, and kilometres as metric units of chmarks for these units to estimate gths	92 - 93
E2.3	use riately to estimate, measur mpar nd explain the effect that overfill s between units, have on accurac	113 – 117
E2.4	compare, estimate, and asu us objects, using a pan balance an tanda	118 – 124
E2.5	use various units of different sizes to m he sa attribute of a given item, and demonstra t ev though using different-sized units produces count, the size of the attribute remains the same	– 94, 111
E2.6	use analog and digital clocks and timers to tell time in hours, minutes, and seconds	
E2.7	compare the areas of two-dimensional shapes by matching, covering, or decomposing and recomposing the shapes, and demonstrate that different shapes can have the same area	125 – 130
E2.8	use appropriate non-standard units to measure area, and explain the effect that gaps and overlaps have on accuracy	125 - 135
E2.9	use square centimetres (cm^2) and square metres (m^2) to estimate, measure, and compare the areas of various two-dimensional shapes, including those with curved sides	136 – 139

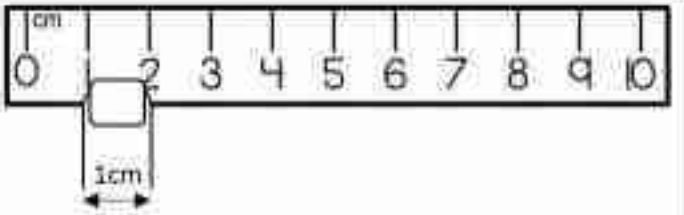
Name: _____ 79

Curriculum Connection
E2.1

Estimating Lengths - Finger Benchmark

We can estimate the length of something by using our fingertip. Your fingertip is approximately 1 cm wide.



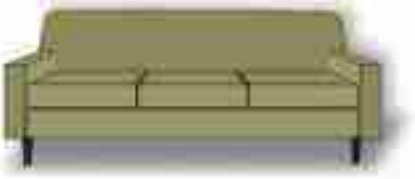


Part 1

Measure the objects below using your fingertip

1) 

Approximately _____ cm

2) 

Approximately _____ cm

3) 

Approximately _____ cm

Approximately _____ cm

5) 

Approximately _____ cm

6) 

Approximately _____ cm

Part 2

Find objects in your class that you can measure

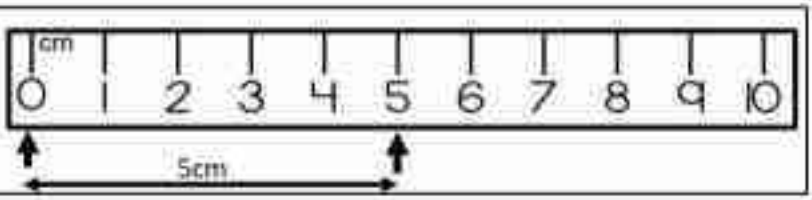
1) The pencil is approximately _____ cm	2) The _____ is approximately _____ cm
3) The _____ is approximately _____ cm	4) The _____ is approximately _____ cm
5) The _____ is approximately _____ cm	6) The _____ is approximately _____ cm

Name: _____ 81

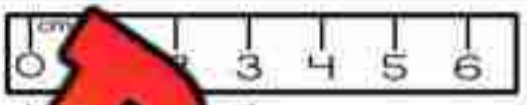
Curriculum Connection
E2.1

Measuring in Centimetres

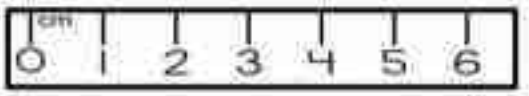
We can accurately measure the length of something by using a ruler.



Questions Read the rulers below to find the distance between the arrows

1) 

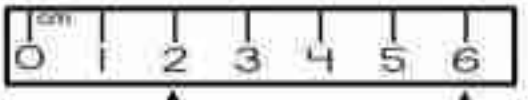
_____ cm

2) 

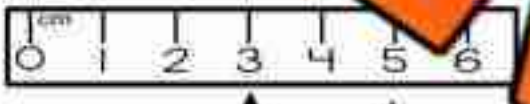
_____ cm

3) 

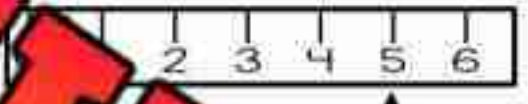
_____ cm

4) 

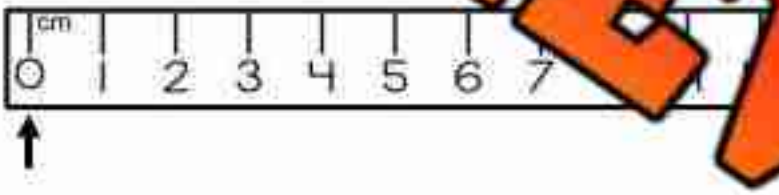
_____ cm

5) 

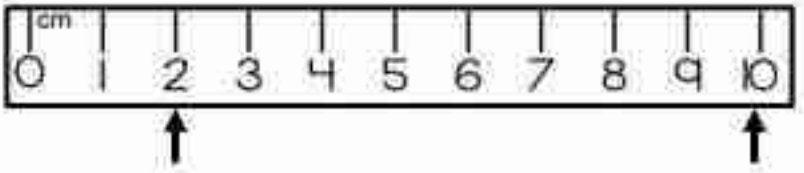
_____ cm



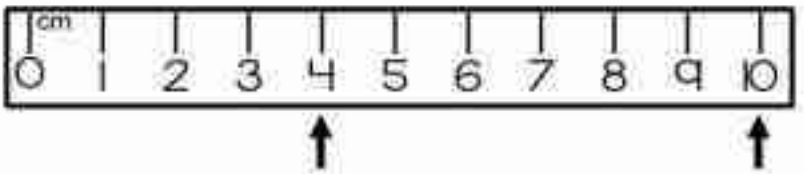
_____ cm

7) 

_____ cm

8) 

_____ cm

9) 

_____ cm

Name: _____ 82

Curriculum Connection
E2.1

Measuring in Centimetres

Questions

Use a ruler to measure the lines below

1) _____ cm

2) _____ cm

3) _____ cm

4) _____ cm

5) _____ cm

6) _____ cm

7) _____ cm

8) _____ cm

9) _____ cm

10) _____ cm

11) _____ cm

12) _____ cm

Name: _____ 83

Curriculum Connection
E2.1

Drawing Lengths Using a Ruler

Questions Draw lines that are the lengths below

1) 5 cm	2) 6 cm
3)	4) 9 cm
5) 4 cm	6) 7 cm
7) 1 cm	8) 8 cm
9) 2 cm	10) 10 cm
11) 14 cm	
12) 17 cm	

Name: _____ 84

Curriculum Connection
E2.1

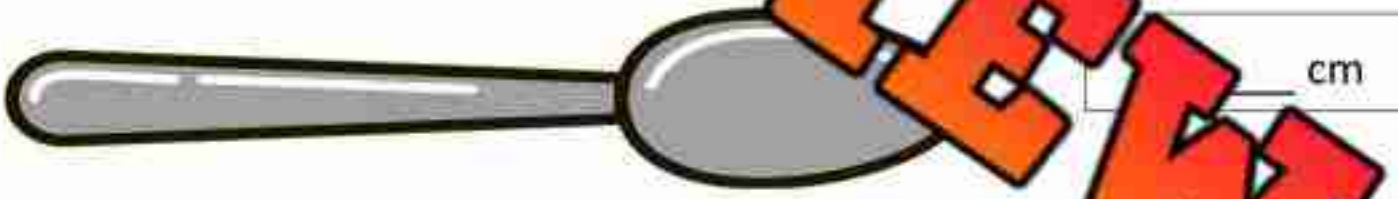
Measuring Real-Life Objects

Questions

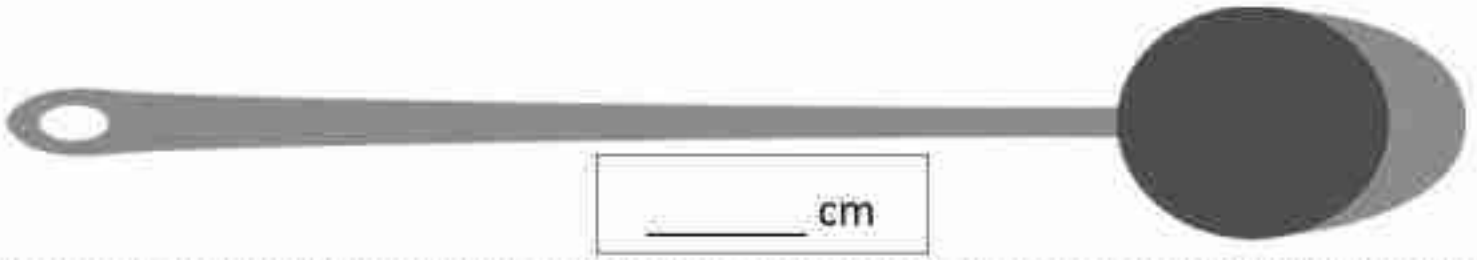
Measure the length of the objects below

_____ cm

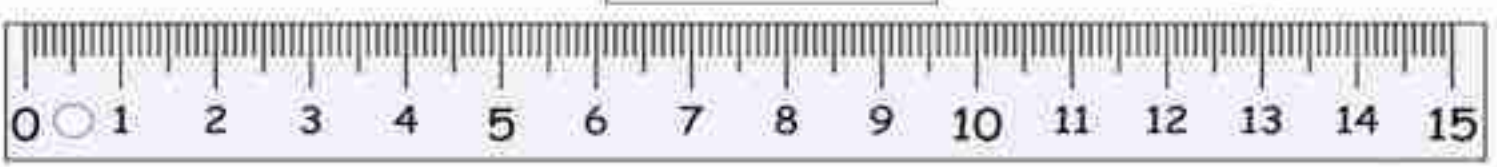
_____ cm



_____ cm



_____ cm



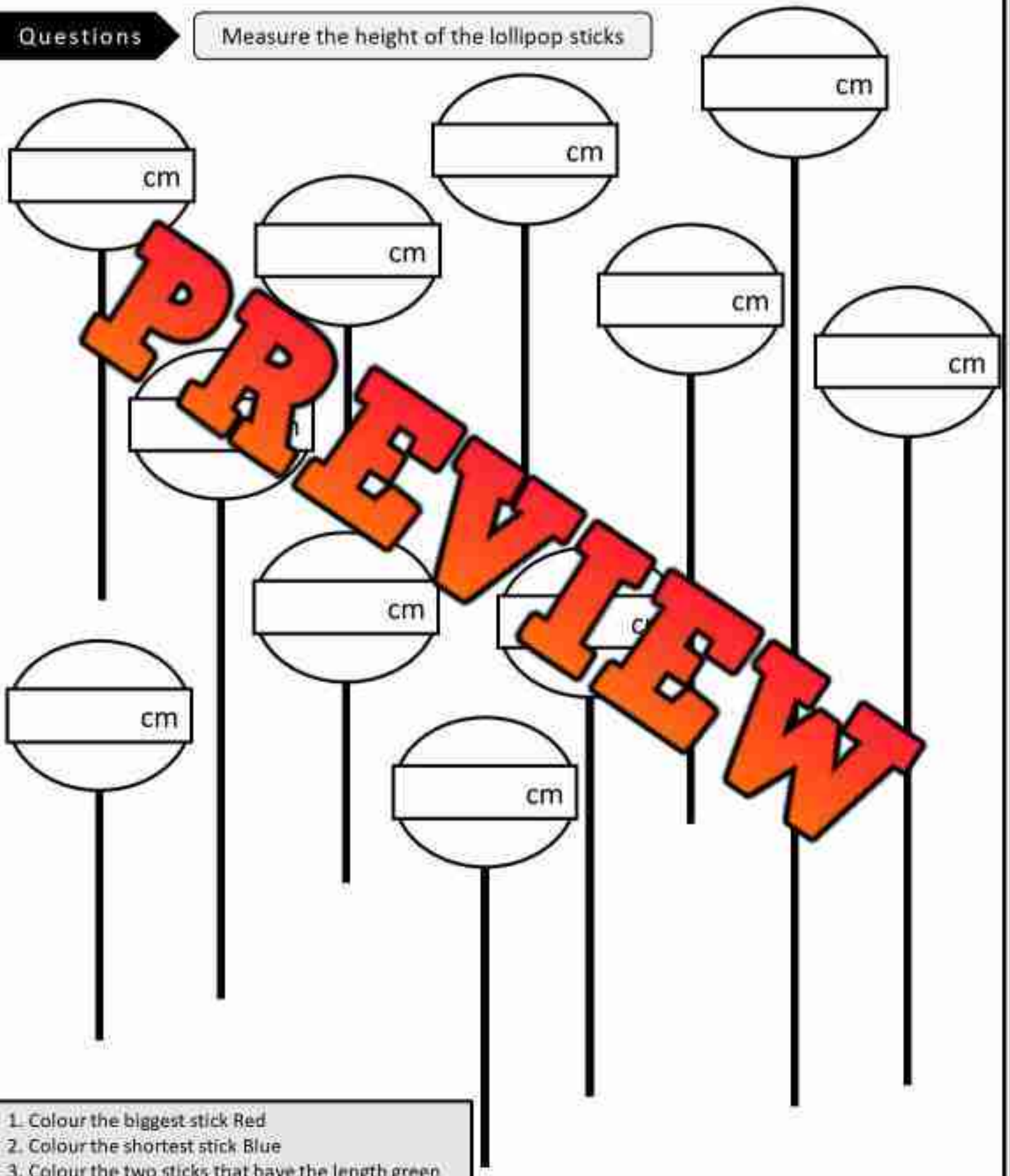
Name: _____ 85

Curriculum Connection
E2.1

Measuring Height - Lollipops

Questions

Measure the height of the lollipop sticks



1. Colour the biggest stick Red
2. Colour the shortest stick Blue
3. Colour the two sticks that have the length green

Name: _____ 86

Curriculum Connection
E2.1

Measuring Real-Life Objects

Questions

Measure the length of the objects below

_____ cm

_____ cm

_____ cm

_____ cm

_____ cm

_____ cm

_____ cm

_____ cm

_____ cm

_____ cm

Name: _____ 87

Curriculum Connection
E2.1

Estimating Length in CM

Questions

Circle which length fits the description

1) A pencil

a) 5cm
b) 15cm
c) 50cm
d) 100cm

2) A computer

a) 5cm
b) 10cm
c) 40cm
d) 100cm

3) A c

a) 50cm
b) 100cm
c) 500cm
d) 900cm

4) A cup

a) 3cm
b) 10cm
c) 50cm
d) 100cm

5) A bottle

a) 3cm
b) 30cm
c) 100cm
d) 300cm

A re ontrol

a)
b) m
c)
d) 500cm

7) An apple

a) 1cm
b) 30cm
c) 10cm
d) 100cm

8) A paper clip

a) 5cm
b) 50cm
c) 100cm
d) 200cm

9) Piece of paper

a) 5cm
b) 15cm
c) 50cm
d) 100cm

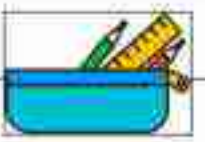
10) A shoe

a) 5cm
b) 15cm
c) 50cm
d) 200cm

Name: _____ 88

Curriculum Connection
E2.1

Measuring Length in CM



Directions Use a ruler to measure the following things

Objects to Measure	Length in CM
1) The length of this paper	
2) The length of your foot/shoe	
3) The length of your hand (thumb to pinky)	
4) The length of your pencil	
5) The length of a marker	
6) The length of a paperclip	
7) The length of an eraser	
8) The height of a water bottle	
9) The length and width of a book	Length = Width =
10) The width of your desk or table	

Name: _____ 90

Curriculum Connection
E2.1

Estimating Length in Metres

Questions

Circle which length fits the description

1) A pool

a) 1m
b) 2m
c) 10m
d) 100m

2) A basketball player

a) 1m
b) 2m
c) 10m
d) 100m

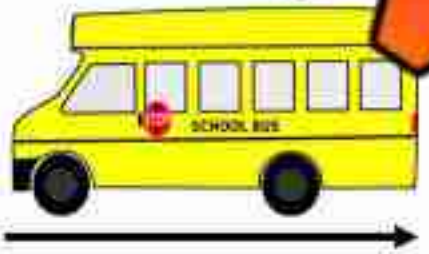
3) A c

a) 1m
b) 2m
c) 5m
d) 100m

4) A school

a) 1m
b) 10m
c) 100m
d) 500m

5) A school bus



a) 1m
b) 2m
c) 10m
d) 100m

6) A ho

a)
b)
c)
d) 500m

7) A soccer field

a) 5m
b) 10m
c) 20m
d) 100m

8) A basketball net

a) 1m
b) 4m
c) 50m
d) 100m

9) A hot tub

a) 2m
b) 10m
c) 50m
d) 100m

10) A stop sign

a) 1m
b) 2m
c) 10m
d) 100m

Name: _____ 91

Curriculum Connection
E2.1

Metric System Units - mm, cm, m, km

Millimetre (mm)	Centimetre (cm)	Metre (m)	Kilometre (km)
Used to measure small lengths/ distances 	Used to measure small to medium lengths/distances 	Used to measure medium to long lengths/distances 	Used to measure long distances/ lengths 

Question ...ich unit of measure would you use to measure the following distances?

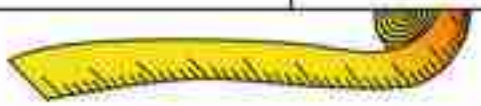
1) The dis...nce yo... ...ss ...tario 	
2) The length of your ...	
3) The length of your eraser 	
4) The length of your classroom 	
5) The distance of a marathon run 	
6) The distance of a 10 second race 	
7) The length of your shoe 	
8) The width your fingernail 	
9) The height of the classroom door 	
10) The length of your school 	

Name: _____ 92

Curriculum Connection
E2.2, E2.5

Metric System Units - mm, cm, m, km

Millimetre (mm)	Centimetre (cm)	Metre (m)	Kilometre (km)
10mm = 1cm 1000mm = 1m	100cm = 1m 1cm = 10mm	1m = 100cm 1000m = 1km	1km = 1000m



Part 1 Fill in the tables below

m	
10	
20	
	3
40	
50	
	6
	7
	8
90	
100	

cm	m
100	1
	2
	3
400	
	5
600	
800	
	9
1000	

m	km
1000	1
2000	2
	3
4000	
	5
	6
	8

Part 2 Convert the units of measurement below

1) 1m	_____cm	5) 5m	_____cm	9) 500cm	_____m
2) 20mm	_____cm	6) 50mm	_____cm	10) 500mm	_____cm
3) 2cm	_____mm	7) 100mm	_____cm	11) 8m	_____cm
4) 50cm	_____mm	8) 30cm	_____mm	12) 300cm	_____m

Name: _____ 93

Curriculum Connection
E2.2, E2.5

Which is Longer?

Part 1 Which distance is farther? Circle the longest distance.

1)	10m	200cm	100mm	1km
2)	20cm	200mm	5km	1000m
3)	5m	500cm	10m	10km
4)		2m	1000mm	150cm
5)	500cm		200mm	1m

Part 2 Read [illegible] ems a[illegible]ve them below

1. Steve and Jen both went for a [illegible] las[illegible] 2000 metres and Jen ran 1km. Who ran further? Explain.

2. Bella is 1 metre tall. Emily is 125cm tall. Who is taller? Explain.

3. Kyle and Simon are arguing over whose feet are bigger. Kyle's foot is 200mm long. Simon's foot is 18cm long. Whose foot is bigger?

Name: _____ 94

Curriculum Connection
E2.1, E2.5

Estimating Distance

Questions Circle which distance is the largest

1) Length of a pencil

a) 30cm
b) 10mm
c) 1km
d) 10cm

2) Length of a soccer field

a) 100m
b) 500m
c) 2km
d) 500cm

3) Dis[illegible] Toronto

a) 10k[illegible]
b) 120km
c) 500cm
d) 500m

4) Length of a gym

a) 15m
b) 3m
c) 300cm
d) 200mm

5) Width of a computer monitor

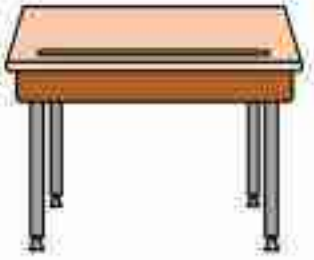
a) 3km
b) 1m
c) 30cm
d) 20mm

[illegible] your shoe

a) [illegible]
b) [illegible]
c) [illegible]
d) 2mm

7) Height of a desk

a) 20km
b) 2m
c) 90cm
d) 200mm



8) Height of an NBA p[illegible]

a) 2km
b) 2m
c) 100cm
d) 200mm

9) Length of a bus

a) 1km
b) 13m
c) 300cm
d) 2000mm

10) Width of an eraser on the end of a pencil

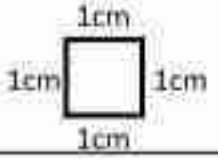
a) 2km
b) 2m
c) 10cm
d) 10mm

Name: _____ 98

Curriculum Connection
E2.1

Measuring Square Side Lengths

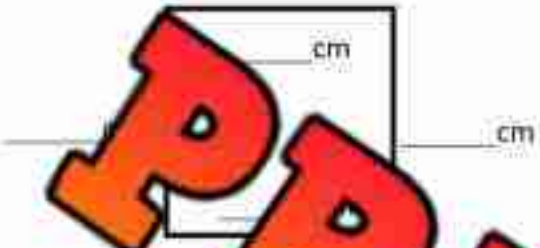
A square has 4 sides that are all the same length. We can find out if a shape is a square by measuring the side lengths.



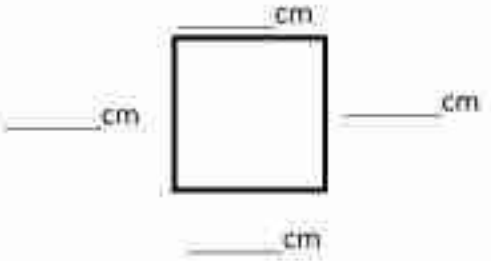
Part 1

Use a ruler to measure the squares below

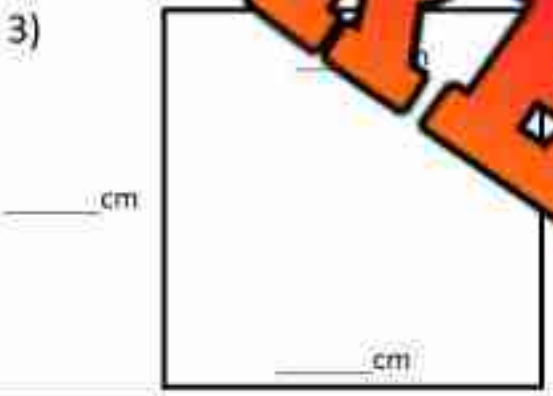
1)



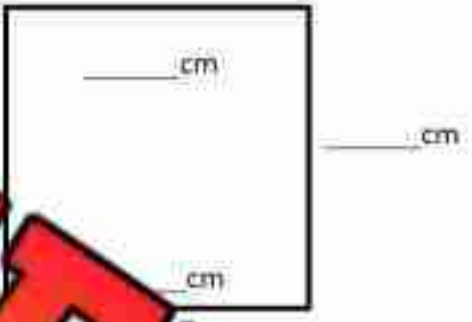
2)



3)



4)



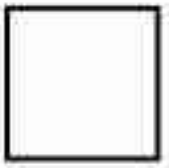
Part 2

Are the shapes squares?

1)

Yes No

2)



Yes No

3)

Yes No

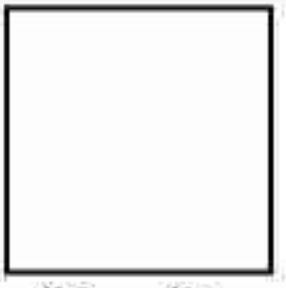
4)

Yes No

5)

Yes No

6)



Yes No

Name: _____ 100

Curriculum Connection
E2.1

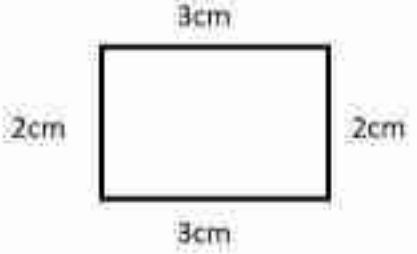
Finding the Perimeter of Irregular Shapes

Part 1

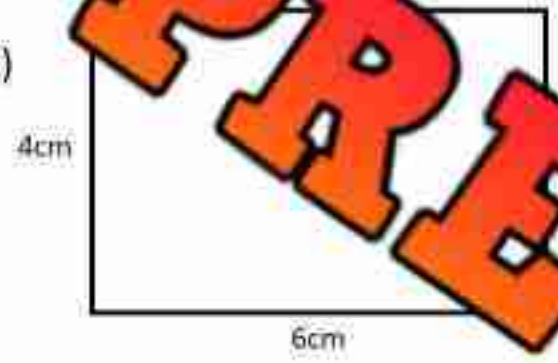
Find the perimeter of the rectangles below

1)

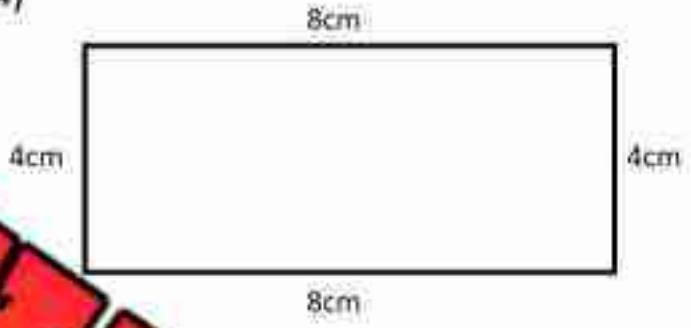
2)



3)



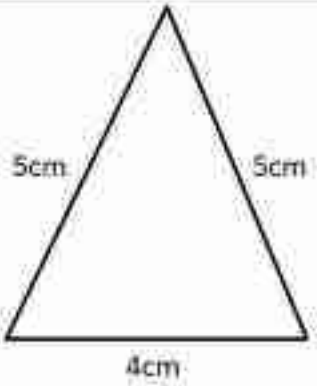
4)



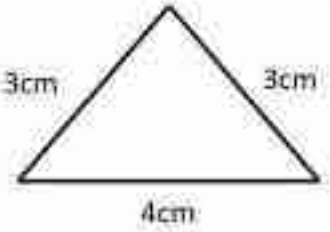
Part 2

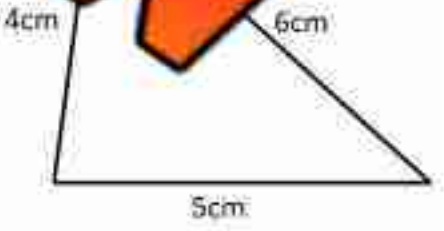
Find the perimeter of the t[illegible] be[illegible]

1)



2)





4) Draw two triangles with the same perimeter with different side lengths

1)	2)

Name: _____ 101

Curriculum Connection: 4.2.1

Calculating Perimeter

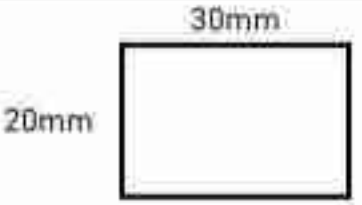
Questions Find the perimeter of the shapes below

*** not to scale

1)

Perimeter = _____cm

2)

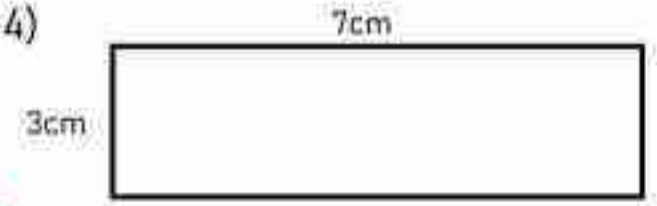


Perimeter = _____mm

3)

Perimeter = _____

4)

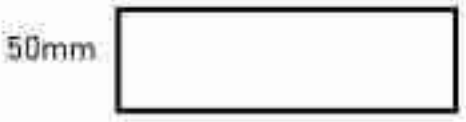


Perimeter = _____cm

5)

Perimeter = _____mm

7)



Perimeter = _____mm

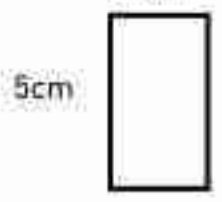
8)

Perimeter = _____cm

9)

Perimeter = _____mm

10)



Perimeter = _____cm

Name: _____ 102

Curriculum Connection
4.2.1

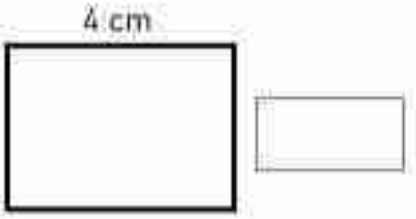
Calculating Perimeter of Unknown Side

Questions Use the perimeter and given lengths to find the unknown side

1)

Perimeter = 16 cm

2)

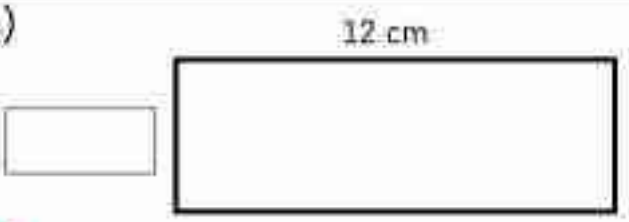


Perimeter = 12 cm

3)

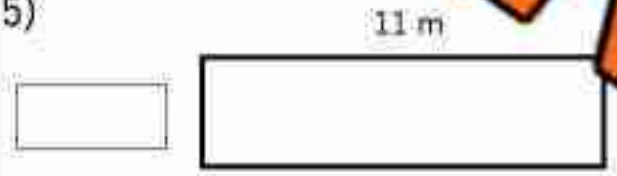
Perimeter = 2

4)

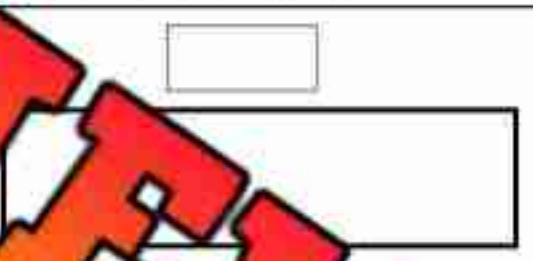


Perimeter = 32 cm

5)



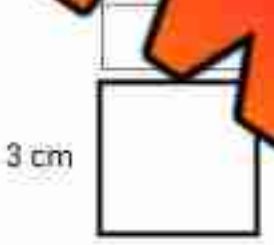
Perimeter = 26 m



7)

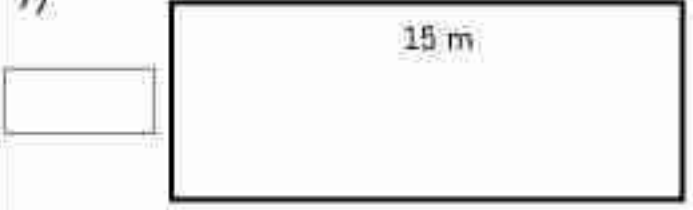
Perimeter = 22 m

8)



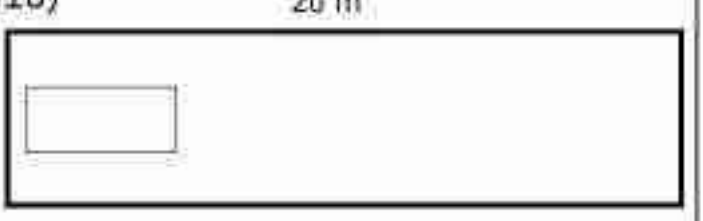
Perimeter = 12 cm

9)



Perimeter = 40 m

10)



Perimeter = 50 m

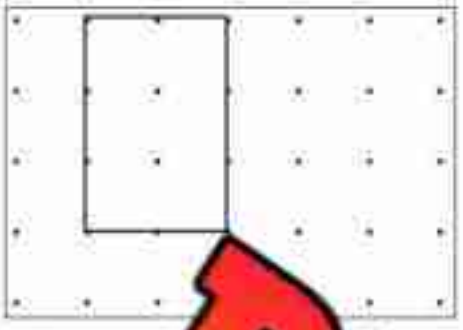
Name: _____ 103

Curriculum Connection
4.2.1

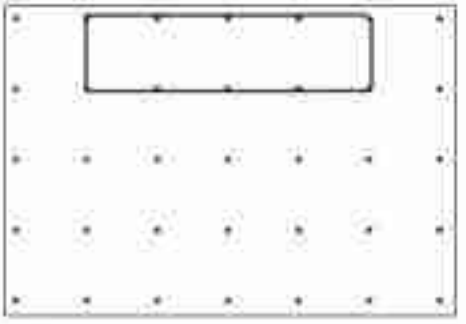
Finding the Perimeter of Irregular Shapes

Part 1

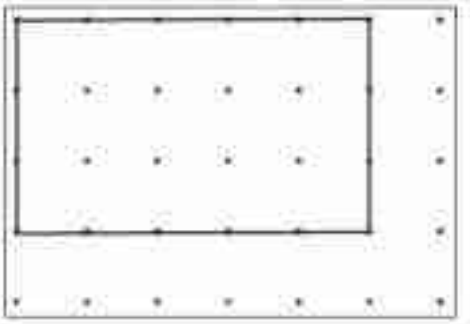
Find the perimeter of the rectangles below



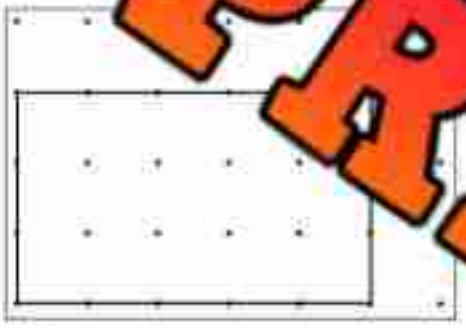
1) Perim



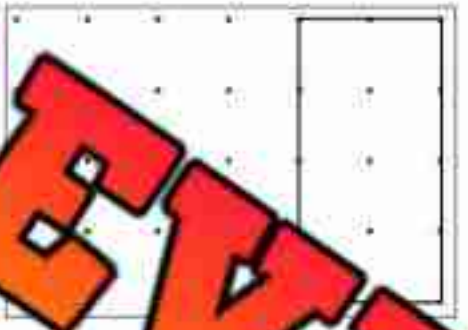
2) Perimeter = _____



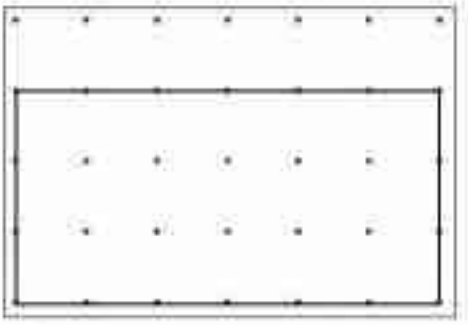
3) Perimeter = _____



4) Perimeter = _____



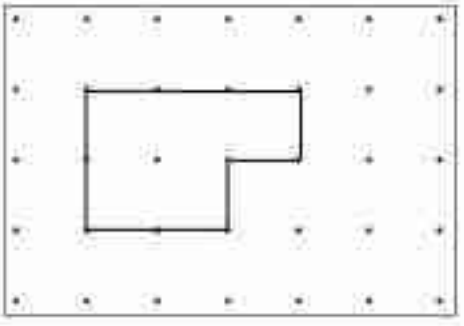
5) Perimeter = _____



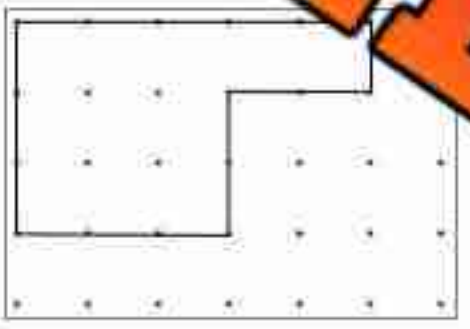
6) Perimeter = _____

Part 2

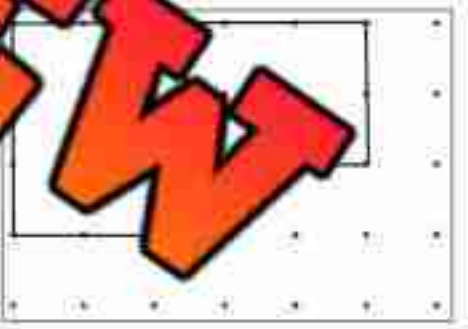
Find the perimeter of the shapes below



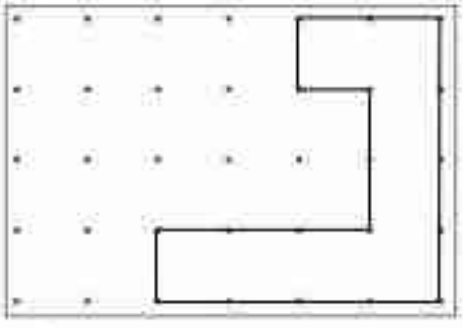
1) Perimeter = _____



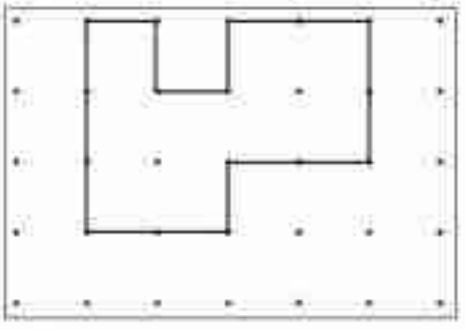
2) Perimeter = _____



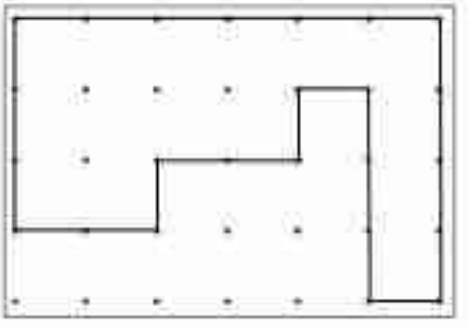
3) Perimeter = _____



4) Perimeter = _____



5) Perimeter = _____



6) Perimeter = _____

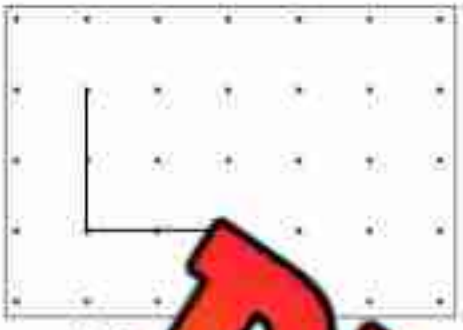
Name: _____ 105

Curriculum Connection
4.2.1

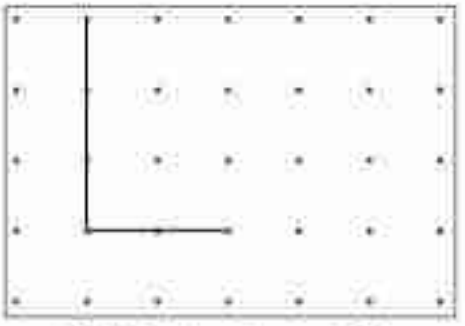
Drawing Shapes Using Perimeter

Part 1

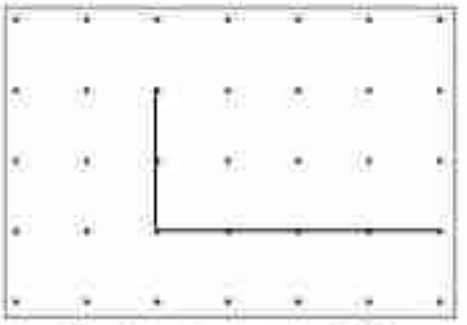
Complete the shapes to match the perimeter



1) P

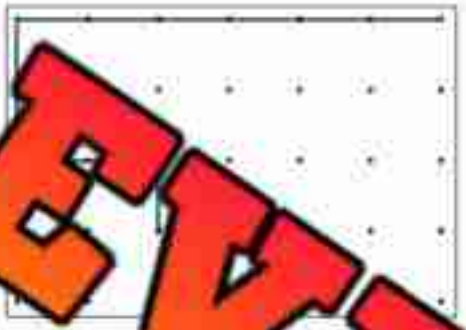


2) Perimeter= 10

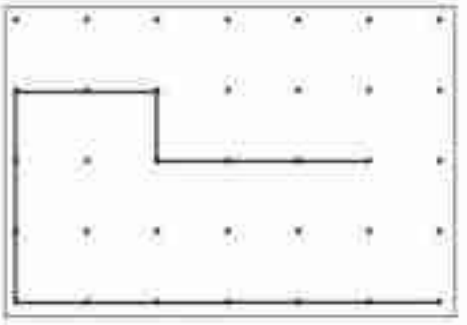


3) Perimeter= 12

4) Perimeter= 16



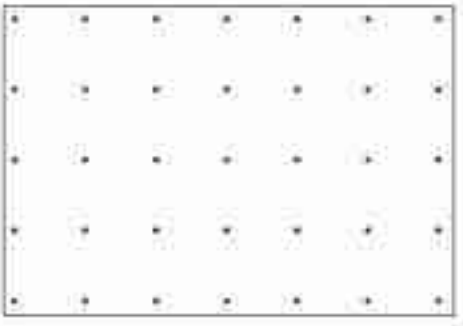
5) P eter=



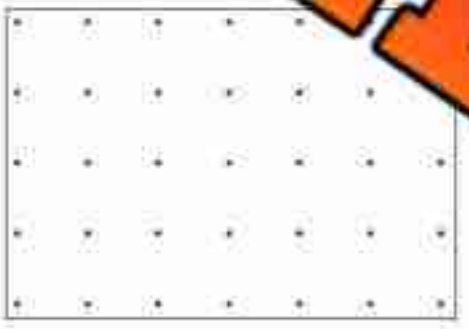
6) Perimeter= 22

Part 2

Draw any shape with the p ters u

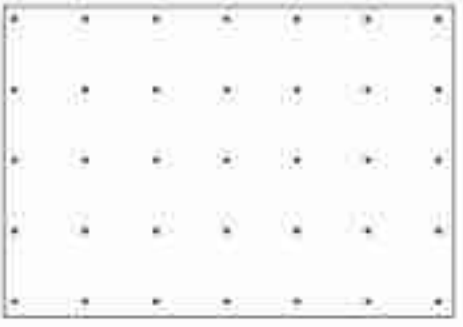


1) Perimeter= 12

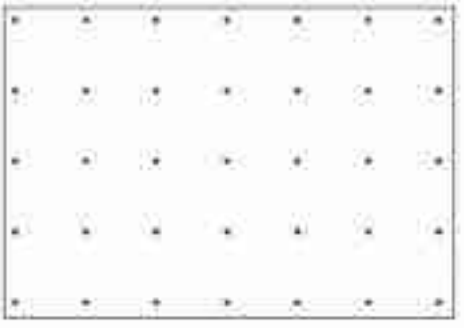


2) Perimeter= 8

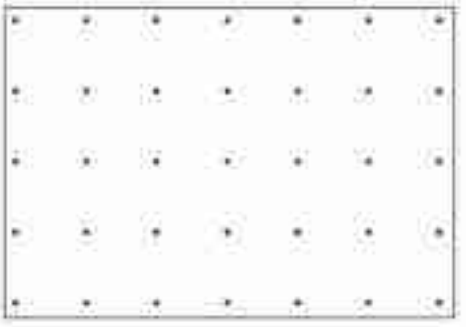
3) Perimeter= 16



4) Perimeter= 20



5) Perimeter= 14



6) Perimeter= 24

Name: _____ 106

Curriculum Connection
4.2.1

Drawing Shapes Using Perimeter

Questions Draw a shape (square, rectangle, or triangle) using the perimeter given

1) Perim[illegible]cm	2) Perimeter= 12cm
3) Perimeter= 16 cm	4) Pe[illegible]r= 20 cm
5) Perimeter= 10 cm	6) Perimeter= 6 cm
7) Perimeter= 22cm	8) Perimeter= 18cm

Name: _____ 108

Curriculum Connection
4.2.1

Challenge - How Many Shapes Can You Draw?

Questions Draw as many shapes as you can with the given perimeter

1)

Perimeter= 12 cm

2)

Perimeter= 1[illegible]

3)

Perimeter= 16 cm

4)

Perimeter= 26 cm

Name: _____ 109

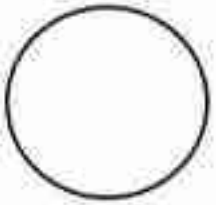
Curriculum Connection
4.2.1

Perimeter of Curved Shapes

Questions

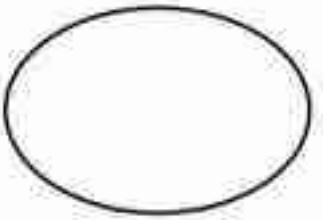
Step 1 - use a string to find the length of these shapes.
Step 2 - measure the length of the string with a ruler to find the perimeter

1)



Perime

2)



Perimeter= _____

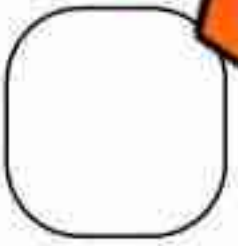
3)

Perimeter= _____

4)

eter= _____

5)



Perimeter= _____

6)

Perimeter

7)

Perimeter= _____

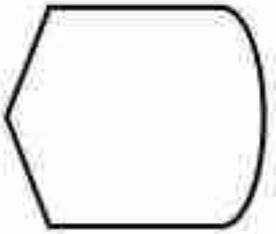
8)

Perimeter= _____

9)

Perimeter= _____

10)



Perimeter= _____

Name: _____ 111

Curriculum Connection
E2.1, E2.5

Perimeter Word Problems

Questions Draw a picture of the problem and then find the perimeter

1) A computer screen is 15cm by 10cm. What is the perimeter of the screen?

2) Pa[illegible] around his yard. His yard is 20m by 10m. What is the perime[illegible] of his

3) The school yard is a rectangle th[illegible]m. What is the perimeter of the yard?

4) A piece of paper is 15cm by 10cm. What is the perimeter

5) Mrs. Wilson is putting a border around her bulletin board. The board is 200cm by 1m. What is the perimeter of the bulletin board?

Name: _____ 112

Curriculum Connection
4.2.1

Perimeter Word Problems - Unknown Side

Questions Draw a picture of the problem and then find the perimeter

1) The perimeter of a square house is 24 metres. What are the lengths of each side?

2) A rectang[illegible] bo[illegible] has a perimeter of 100 cm. The top and bottom have [illegible]ths o[illegible]ach. What are the side lengths of the other two sides?

3) A rectangular garden has a perimeter o[illegible] me[illegible] lengths are 6 m. What are the lengths of the other sides?

4) A triangle baseball field has a perimeter of 68 metres. Two of the side lengths are 22 m. What is the length of the third side?

Name: _____ 113

Curriculum Connection
E2.3

Capacity

Capacity is the amount a container can hold. We can use smaller containers to fill a larger container. It is important to not underfill or overfill when we are measuring the capacity of a container.

Example – 4 smaller paper cups fill the larger cup

Question: Estimate how many of the smaller things will fit into the larger cup


x _____


x _____


x _____


x _____


x _____


x _____


x _____

Name: _____ 114

Curriculum Connection
S2.3

Measuring Capacity Activity

Research Question

How many cups will fill the larger bowl?

We can find out the capacity of a container by filling it to the top. We need to make sure we do not overfill or underfill the container.

Materials

What do we need?

- One la[illegible]
- 1 sm[illegible]
- Ri[illegible]enough to fill the bowl)
- Wate[illegible]enou[illegible]e b[illegible]l)
- Large cont[illegible]the [illegible]ent in to avoid a mess (optional)

Method

[illegible] do t[illegible]riment?

1. Write your hypothesis bel[illegible]
2. Fill up the smaller cup with wate[illegible] pour i[illegible]larger bowl
3. Do this until the container is full.
4. Record how many cups of water fit into[illegible]owl ([illegible]owl's capacity)
5. Repeat steps 2-4 using the other material (r[illegible]arble
6. Answer the questions

Hypothesis

What do you estimate will happen?

1. How many cups of water will fit into the bowl? _____

2. How many cups of _____ (sand, rice, marbles) will fit into the bowl? _____

Observations

What happened?

1. How many cups of water fit into the bowl? _____

2. How many cups of _____ (sand, rice, marbles) fit into the bowl? _____

Name: _____ 115

Curriculum Connection
S2.3

Capacity Experiment - Questions

Questions | What did we learn?

1. What does capacity mean?

2. What is the capacity of the bowl?

a) _____ cups

b) _____ cups

3. Did the container hold the same amount of cups of water versus the other material? Explain.

4. Was your hypothesis correct? Did you estimate the container would hold more or less?

5. Which container has a larger capacity – the bowl or the cup you used?

6. What do you think the capacity of people that could fit in your classroom is?

Name: _____ 116

Curriculum Connection
K2.3

Capacity - Which Holds More?

Questions Which container do you think will hold more?

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9) 

10) 

Name: _____ 117

Curriculum Connection
E2.3

Capacity - Comparing Litres

A litre is a unit of measurement that measures the capacity of a container. This container holds 1 litre.

1 litre = 4 cups

Questio

Does the container hold more or less than 1 litre?

1)  more less	2)  more less	3)  more less
4)  more less	5)  more less	more less
7)  more less	8)  more less	9)  more less

Name: _____ 118

Curriculum Connection
E2.A

Which Object Has More Mass?

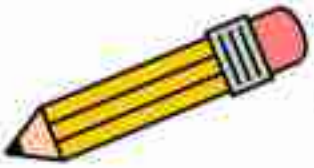
Mass is the amount of matter in an object. Objects with more mass have more weight. But, weight depends on where the object is and mass is always the same.

Example - We weigh very little on the moon because gravity isn't as strong, but our mass is the same.

Question — Circle which object you think has more mass

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

9) 

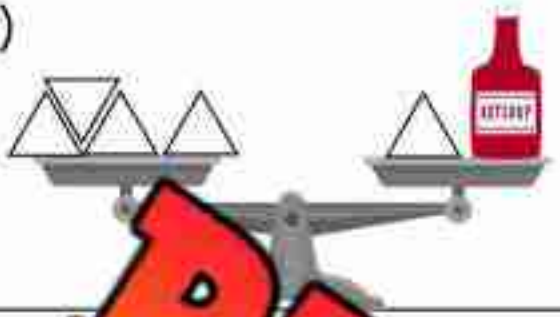
10) 

Name: _____ 120

Curriculum Connection
E2.A

Balancing Scales - Measuring Mass

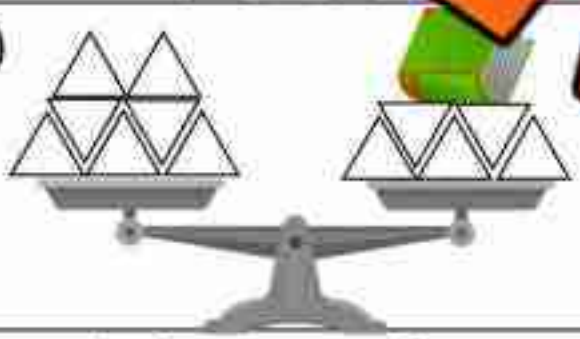
Questions How many △ do the objects weigh?

1) 

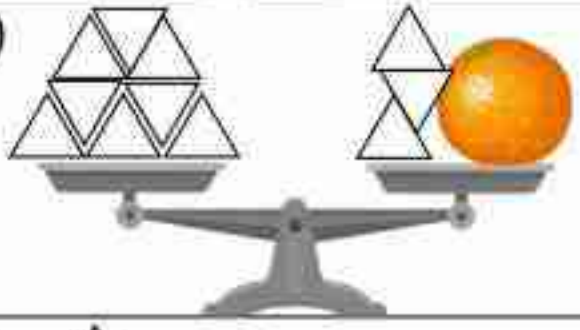
The ketchup weighs _____ △.

2) 

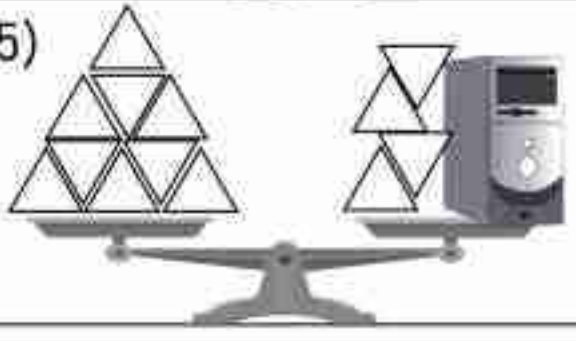
The brick weighs _____ △.

3) 

The [illegible] weighs _____ △.

4) 

The orange weighs _____ △.

5) 

The computer weighs _____ △.

Name: _____ 121

Curriculum Connection
E2.A

Two-Pan Balance - Comparing Mass

A **two-pan balance** is a tool we can use to find the mass of different objects. When we use a two-pan balance, we can use multiple objects to equal the mass of one object on the other side.

3 b = 1 lap

2 laptops= 1 brick

2 bricks = 1 TV

Questions

Use the information above to answer the questions

1) 

3 books = _____ laptops

6 books = _____ laptops

3) 

1 TV = _____ bricks

2 TVs = _____ bricks

5) 

6 brick = _____ TVs

6) 

2 bricks = _____ laptops

7) 

3 laptops = _____ books

8) 

6 laptops = _____ bricks

9) 

9 books = _____ laptops

10) 

3 TVs = _____ bricks

Name: _____ 122

Curriculum Connection
E2.A

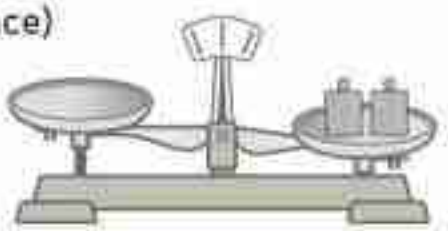
Measuring Mass Activity

Background — What is a pan balance?

We can use a pan balance to measure the mass of an object. A **pan balance** allows us to compare the mass of one object to the mass of another object. If we know the mass of the one object, we can find out the weight of the other object.

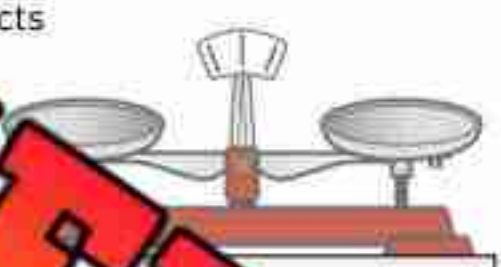
Materia' — What do we need?

- Pan b… …ve pan balance and/or regular pan balance)
- 8 …
- Re… …ng She…



Method — …do w… …experiment?

1. Write your estima… …Rank… …bjects from heaviest to lightest
2. Use the pan balance t… …th… …he objects
3. Record the mass of the ob… …s in…
4. Answer the questions



Observations — What happened?

Object	**Estimate** – Rank fr… …s Heaviest (1) to Lightest (… Ho… …w grams

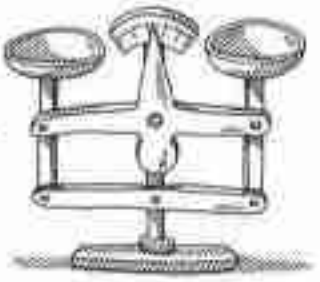
Name: _____ 123

Curriculum Connection
E2.A

Mass Activity - Questions

Questions | What did we learn?

1. What does mass mean?



2. Were [illegible] correct? Which objects surprised you?

3. Which object had the [illegible] least?

   a) most mass = _____

   b) least mass = _____

4. Are mass and weight the same? Explain.

5. What does it mean when we balance the pan scale?

6. Which 3 objects in your classroom have the most mass (not people)?

Name: _____ 124

Curriculum Connection
E2.A

Using Referents to Measure Mass

Use the referents to help you estimate how much mass the objects below have.

Brick – approximately 1 kg

Book – approximately 500g

Lollipop – approximately 100g

Paperclip – approximately 1g

Ques... circle the estimate you think makes the most sense

1) Soccer ball
a) 5g c) 10kg
b) 1kg d) 10g

2) Water bottle
a) 5g c) 10kg
b) [illegible] d) 500g

3) Pencil
a) 1g c) 10kg
b) 1kg d) 10g

a) 50 [illegible]kg
b) [illegible]

5) Laptop
a) 5g c) 10kg
b) 2kg d) 100g

6) Ch[illegible]
a) 10g [illegible]kg
b) 5kg d) 100[illegible]

7) Chocolate bar
a) 50g c) 3kg
b) 9kg d) 1g

8) Toothpick
a) 1g c) 1kg
b) 5kg d) 10g

9) Shoe
a) 50g c) 10kg
b) 1kg d) 100g

10) Pillow
a) 500g c) 5kg
b) 10kg d) 5g

11) Desk
a) 30g c) 10kg
b) 1kg d) 100g

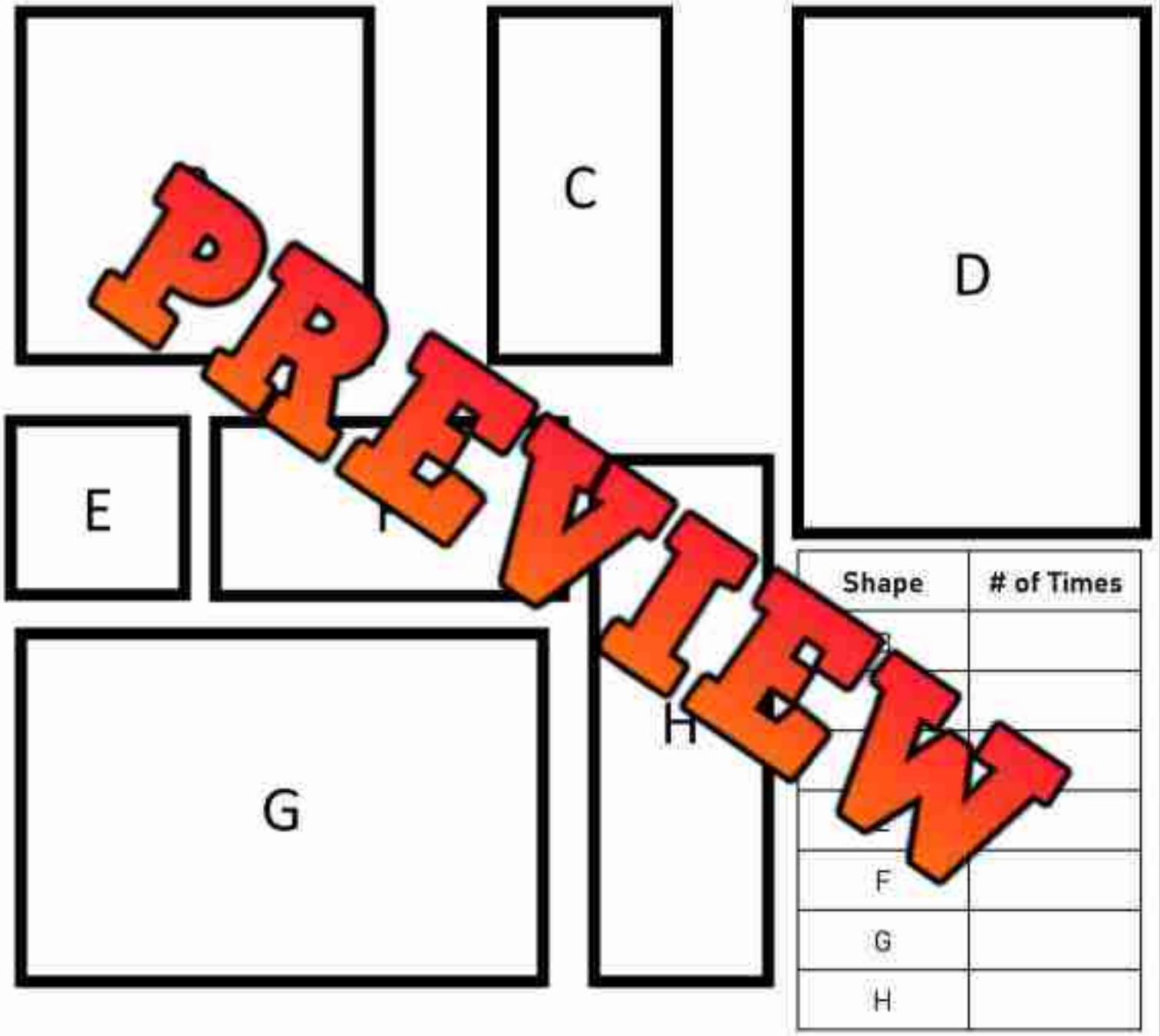
12) Candy
a) 500g c) 10kg
b) 1kg d) 1g

Name: _____ 126

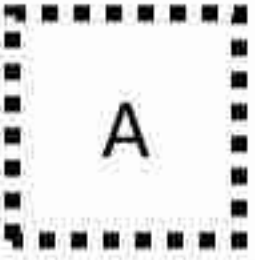
Curriculum Connection
E2.7, E2.9

Area

Questions Cut A out and find out how many times it fits into the other shapes



Shape	# of Times
F	
G	
H	



Name: _____ 129

Curriculum Connection
E2.7, E2.9

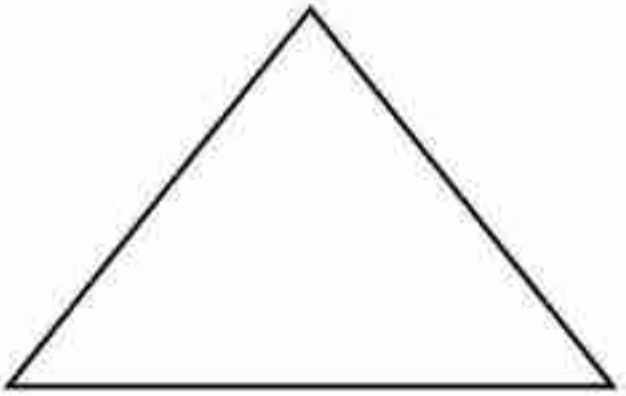
Estimating Area Using Non-Standard Units

Questions Use a shape from your classroom to estimate the area. How many times does your shape fit?

1)

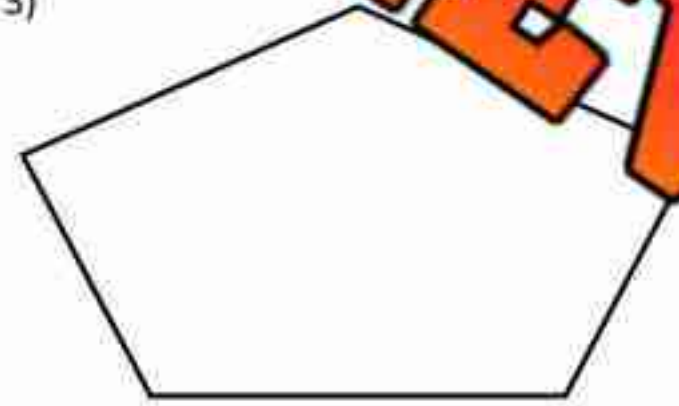
Area = _____ units

2)



Area = _____

3)

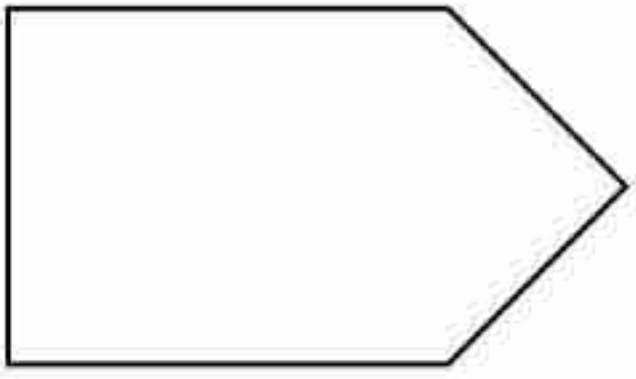


Area = _____

4)

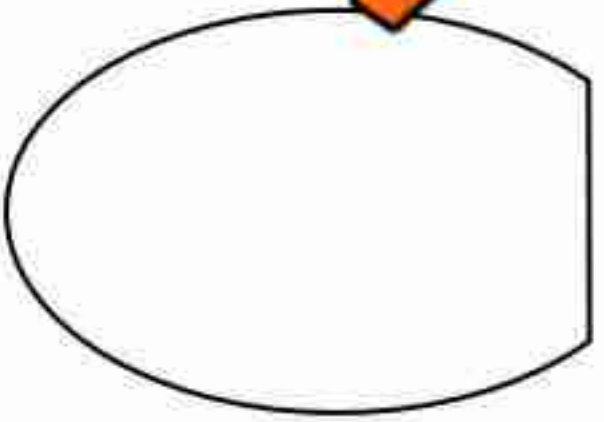
Area = _____

5)



Area = _____

6)



Area = _____

Name: _____ 131

Curriculum Connection
E2.8

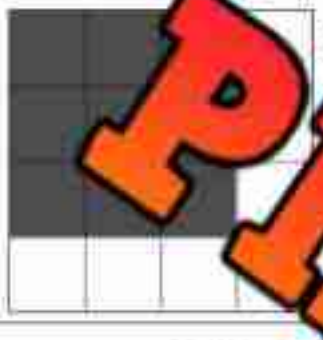
Introduction to Area

Area is the amount of surface or space inside a two-dimensional region.

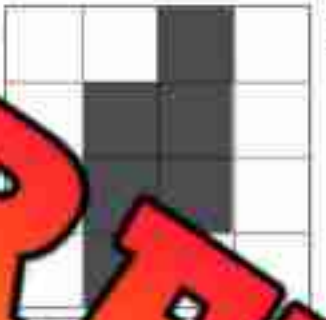
Example – The area of the shape is 5 squares.

Questions

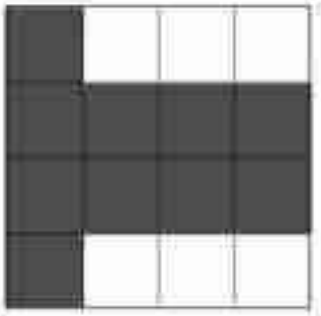
What is the area of the shape in squares?

1) 

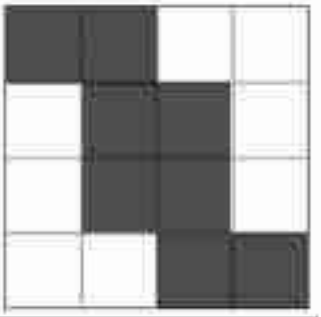
_____ squares

2) 

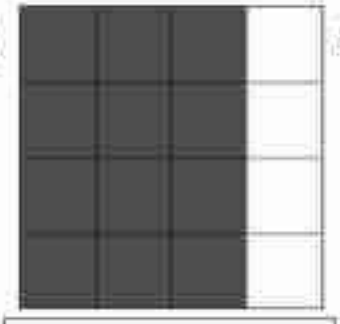
_____ square

3) 

_____ squares

4) 

_____ squares

5) 

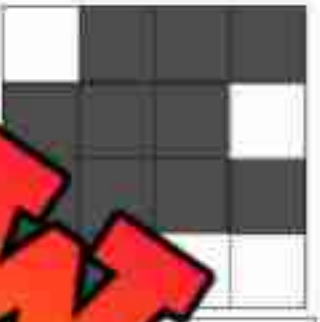
_____ squares

6) 

_____ squares

7) 

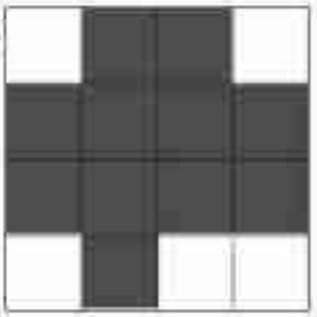
_____ squares

8) 

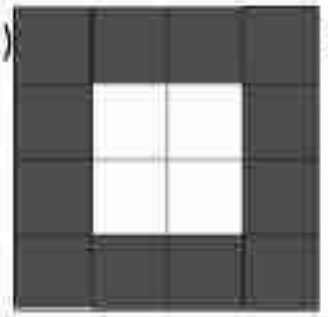
_____ squares

9) 

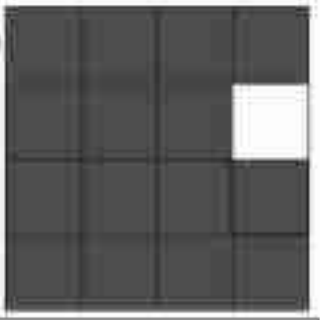
_____ squares

10) 

_____ squares

11) 

_____ squares

12) 

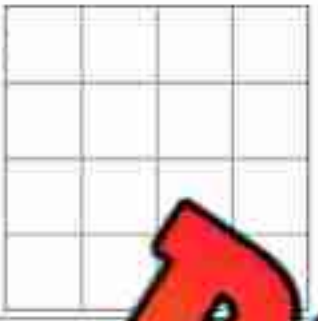
_____ squares

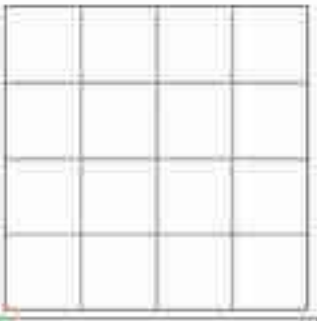
Name: _____ 132

Curriculum Connection
E2.8

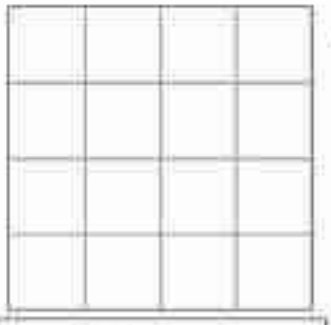
Introduction to Area

Questions Shade in the area

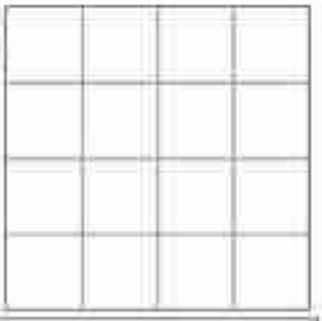
1) 

2) 

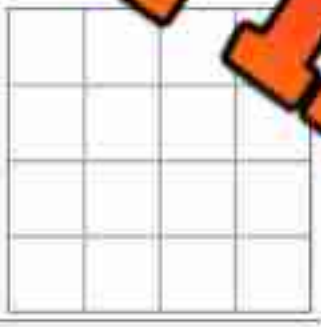
8 squares

3) 

12 squares

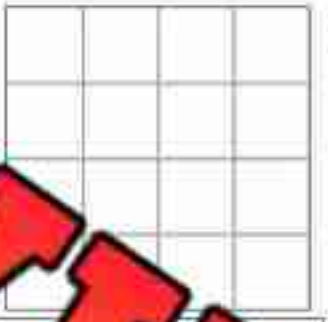
4) 

10 squares

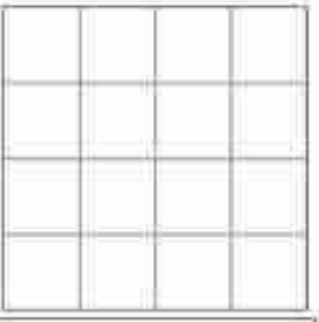
5) 

14 squares

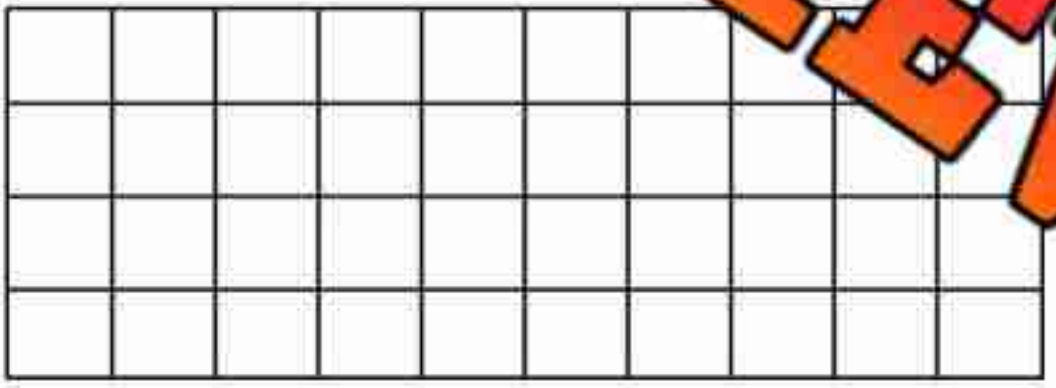
13 squares

7) 

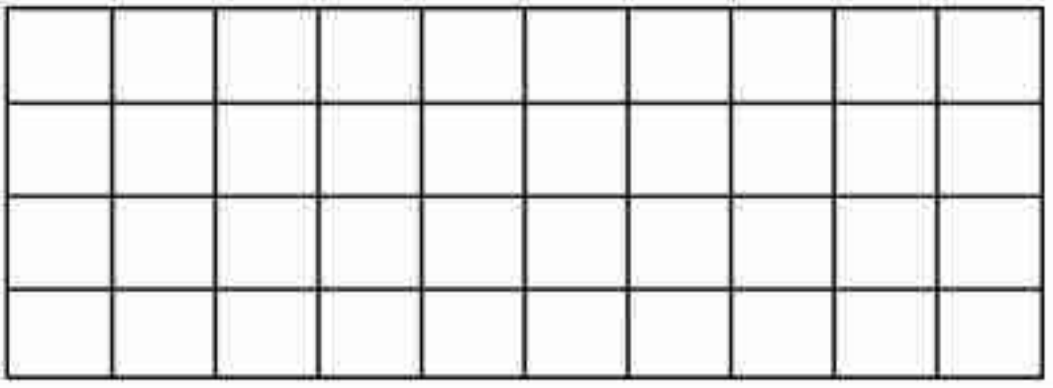
squ

8) 

16 squares

9) 

ares

10) 

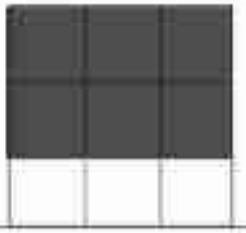
33 squares

Name: _____ 133

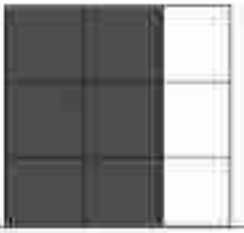
Curriculum Connection
F2.8

Comparing Areas

The area of two shapes can be the same, but may look different. The two shapes just need to take up the same amount of space.



Area = 6 Squares



Area = 6 Squares

Question Draw a shape that has the same area but looks different

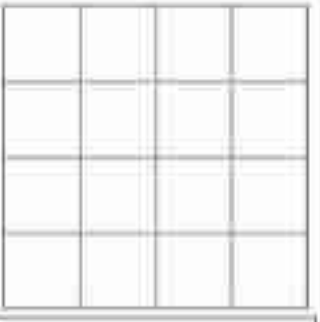
1) 

_____ squares

_____ squares

2) 

_____ squares



_____ squares

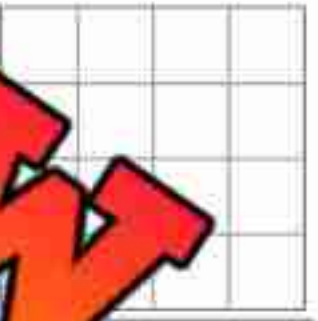
3) 

_____ squares

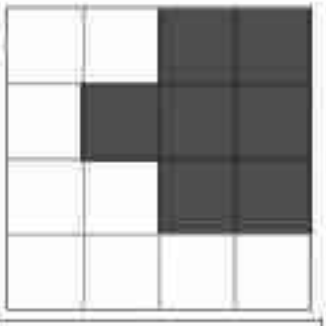
_____ squares

4) 

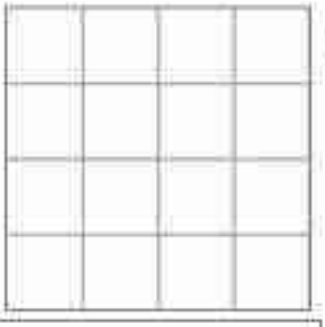
_____ squares



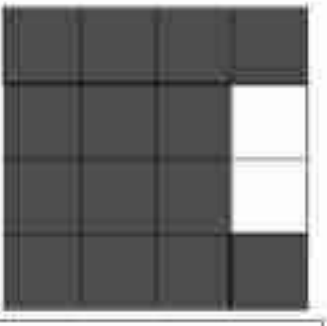
_____ squares

5) 

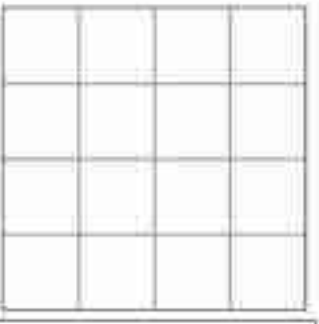
_____ squares



_____ squares

6) 

_____ squares



_____ squares

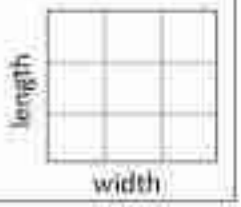
Name: _____ 134

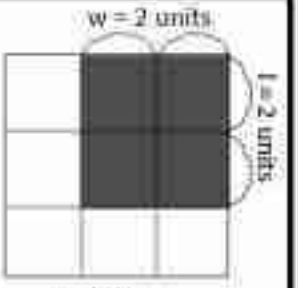
Curriculum Connection
F2.8

Area - Units Squared

When we calculate the area of a shape, we can use the following formula

A = length (l) x width (w)

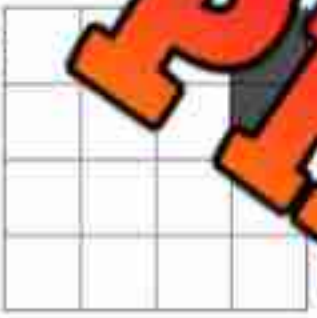




A= l x w
A = 2 x 2
A = 4 units²

Question Find the area of the shapes below

1)

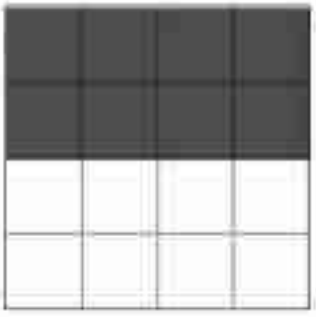


w
__
__ units²

2)

A= l x w
A = __ x __
A = __ units²

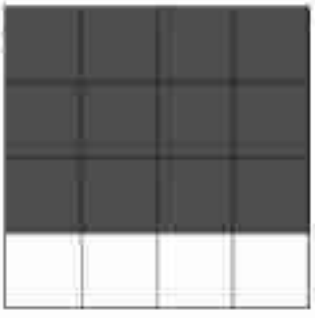
3)



A= l x w
A = __ x __
A = __ units²

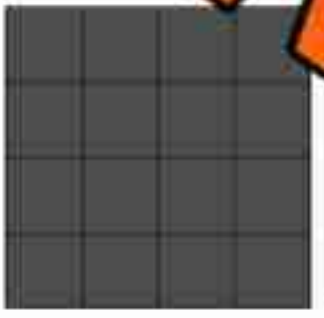
A= l x w
A = __ x __
__ units²

5)



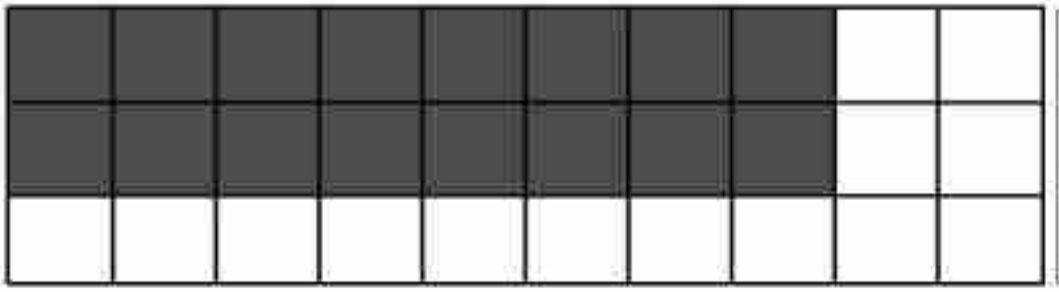
A= l x w
A = __ x __
A = __ units²

6)



A= l x w
A = __ x __
A = __ units²

7)

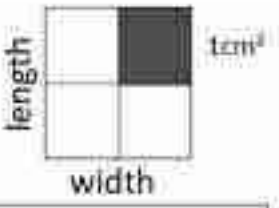


A= l x w
A = __ x __
A = __ units²

Name: _____ 135

Curriculum Connection
F2.8

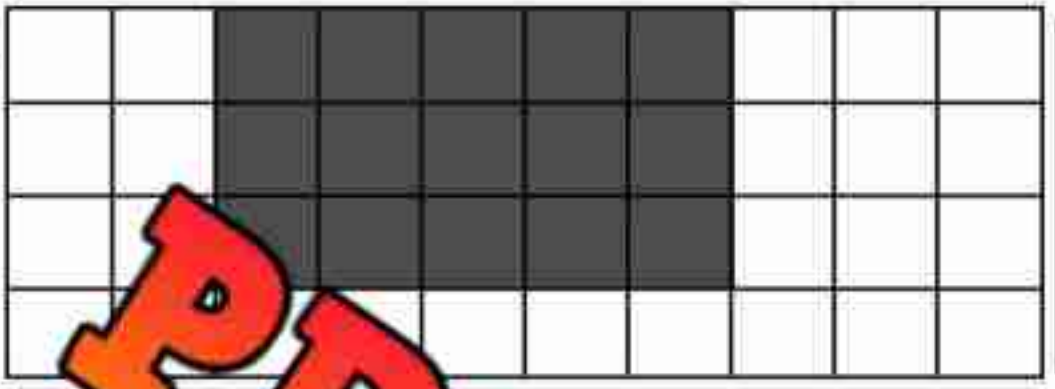
Area - CM Squared



Questions

Calculate the area using cm as your units

1)

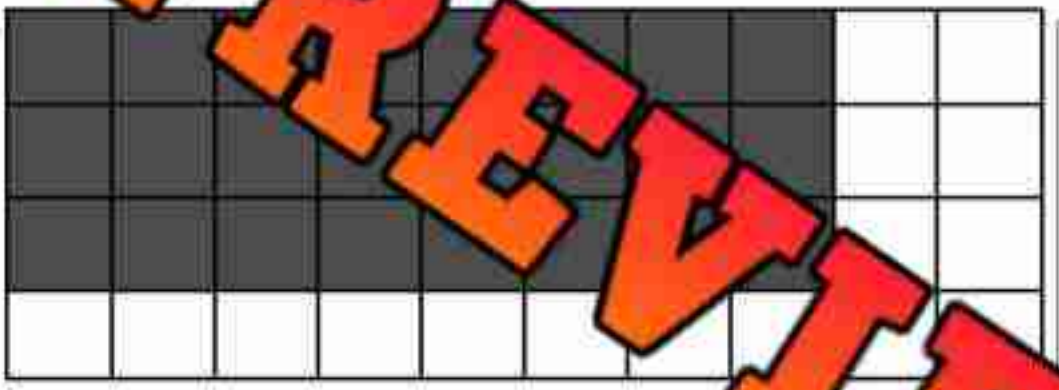


A= l x w

A = __ x __

A = __ units²

2)

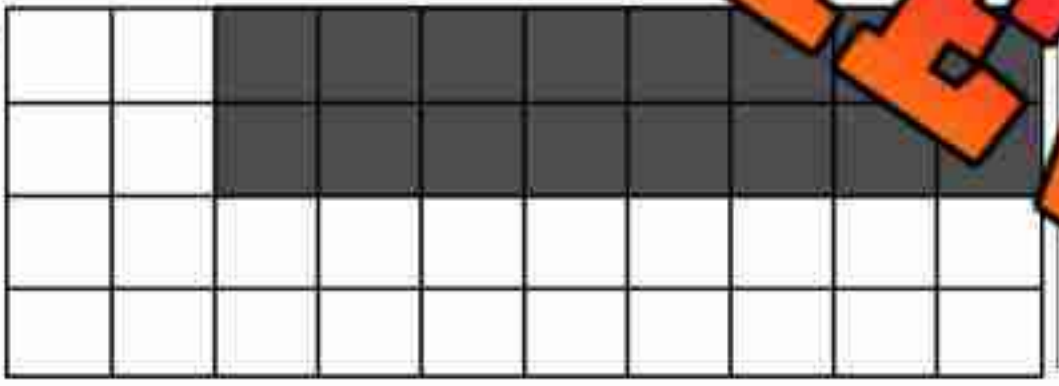


A= l x w

____ = ____ x ____

____ = _____

3)



A= l x w

____ = ____ x ____

____ = _____

4)

A= l x w

____ = ____ x ____

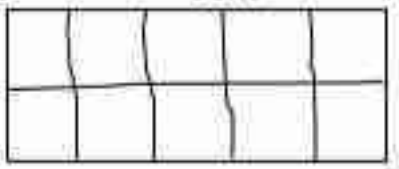
____ = _____

Name: _____ 136

Curriculum Connection
E2.9

Calculating Area Using CM

We can draw lines on shapes to segment them into cm squares. Try your best to make the squares equal.



Questions Draw lines in the shapes below to create cm squares. Then count the squares

1) 4cm, 3cm

Area = _____

2) 6cm, 2cm

Area = _____ cm²

3) 5cm, 3cm

Area = _____

4) 6cm, 4cm

Area = _____

5) 10cm, 4cm

Area = _____

6) 5cm, 5cm

Area = _____

Name: _____ 137

Curriculum Connection
EZ 9

Area - CM Squared

Questions Solve using the formula: A= b x h

1) 4cm, 3cm

A= b x h
A = ____ x ____
A = ____ cm²

2) 6cm, 4cm

A= b x h
A = ____ x ____
A = ____ cm²

3) 5cm, 4cm

A= b x h
A = ____ x ____
A = _____

4) 6cm, 4cm

A= b x h
A = ____ x ____
A = _____

5) 10cm, 3cm

A= b x h
A = ____ x ____
A = _____

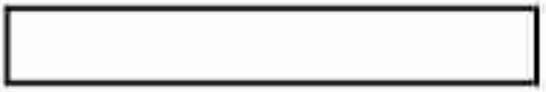
Name: _____ 138

Curriculum Connection
EZ 9

Perimeter and Area

Questions Measure the side lengths and then calculate the perimeter and area

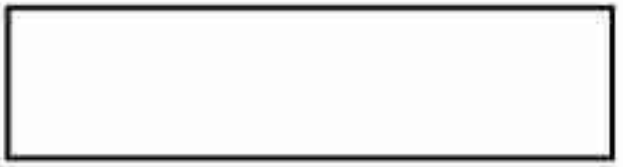
1)



Perimeter: _____

Area: _____

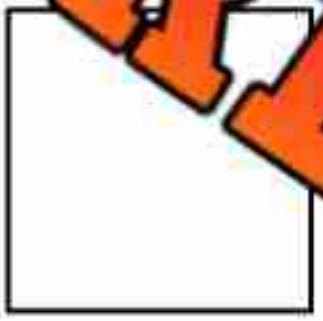
2)



Perimeter: _____

Area: _____

3)



Perimeter: _____

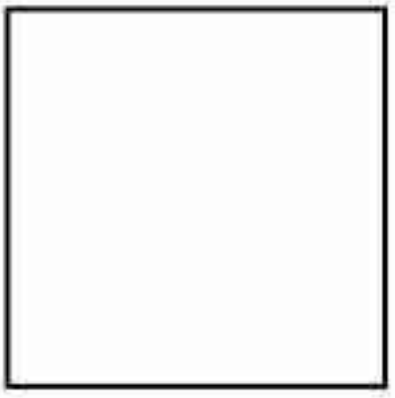
Area: _____

4)

Perimeter: _____

Area: _____

5)



Perimeter: _____

Area: _____

6)

Perimeter: _____

Area: _____

Name: _____ 140

Measurement Unit Test

Part 1 Use a ruler to measure the lines below

1)	2)	3)
_____ cm	_____ cm	_____ cm

Part 2 Draw a line that is the correct length

1)	2)	3)
5 c	3 cm	4 cm

Part 3 Fill in

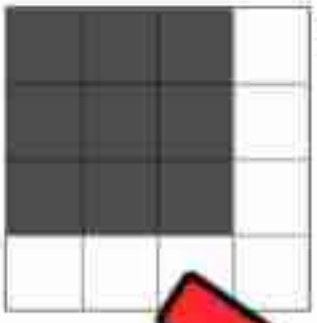
mm	cm			m	km
10	1	100	1	1000	1
20	2			2000	2
	3	300			3
40		400		40	
50			5		
	6	600			6
	7		7	7000	
	8	800			8
90			9		9
100		1000		10000	

Part 4 Write the same number for the different units of measurement

1) 1m _____ cm	5) 5m _____ cm	9) 500cm _____ m
2) 20mm _____ cm	6) 50mm _____ cm	10) 500mm _____ cm

Part 5

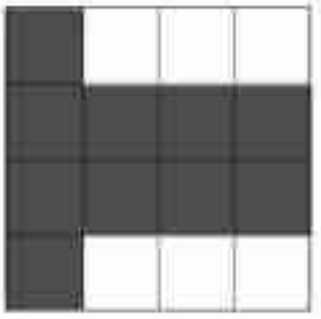
What is the area of the shape in squares?

1) 

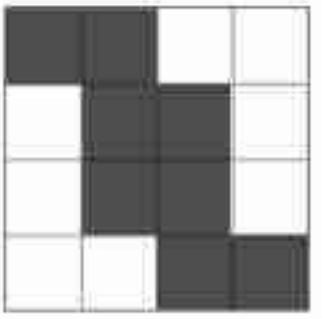
_____ squares

2) 

_____ squares

3) 

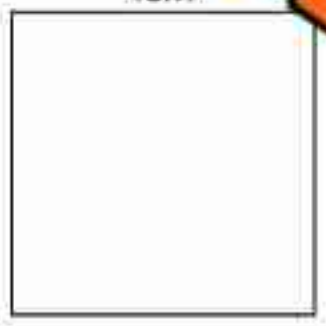
_____ squares

4) 

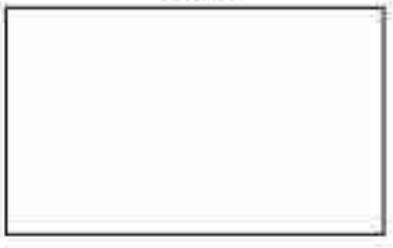
_____ squares

Part 6

Draw the shape below to create cm squares. Then count the squares

1) 

Area = _____cm²

3) 

Area = _____

4) 

Area = _____

Name: _____ 143

Curriculum Connection
K2.4

Telling Time - Digital Clocks

A **digital clock** tells us what time it is using numbers. The first number before the colon tells us what hour it is. The second set of numbers tells us how many minutes have passed the hour.

Examples

7:20

Hour = 7 Minutes = 20

2:47

Hour = 2 Minutes = 47

Part 1 Fill in the answers below – Hours and Minutes

1) _____

Hour = _____ Minutes = _____

2) **1:58**

Hour = _____ Minutes = _____

3) **9:2**

Hour = _____ Minutes = _____

4) **4:37**

Hour = _____ Minutes = _____

5) **11:42**

Hour = _____ Minutes = _____

6) **2**

Hour = _____ Minutes = _____

Part 2 Fill in the answers below – Hours, Minutes a

Example **10:24:18** Hour = 10 Minutes = 24 Seconds = 18

1) **3:17:12**

Hour = _____ Minutes = _____ Seconds = _____

2) **12:43:35**

Hour = _____ Minutes = _____ Seconds = _____

3) **9:12:38**

Hour = _____ Minutes = _____ Seconds = _____

4) **5:23:02**

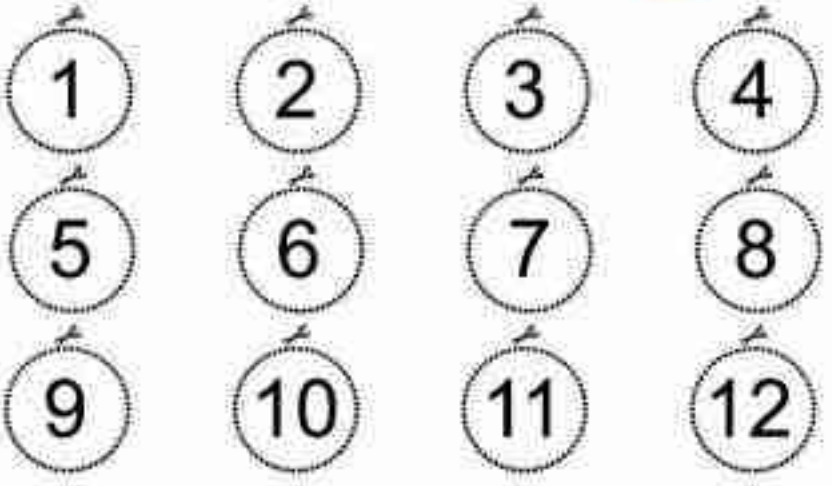
Hour = _____ Minutes = _____ Seconds = _____

Name: _____ 144

Curriculum Connection
K2.4

Making a Clock

Directions Cut out the parts of the clock and paste them in the right spots



Name: _____ 145

Curriculum Connection
K2.6

Analog Clock

An **analog clock** tells us what time it is. The short hand tells us what hour it is. When the hour hand moves around, it goes up by 1 each time. The long hand tells us how many minutes have gone by in the hour. The long hand goes up by 5 minutes at each interval.

Part 1

Fill in the minutes around the clock. Then label the **hour** and **minute** hand

Part 2

How many minutes have gone by in the hour?





_____ _____ _____ _____ _____

Name: _____ 146

Curriculum Connection
K2.4

Telling Time - Nearest Hour

Questions What time is it? Write the times on the digital clocks below

1) 
:00

2) 
:00

3) 
:00

4) 
:00

5) 
:00

6) 
:00

7) 
:00

8) 
:00

Name: _____ 147

Curriculum Connection
K2.6

Drawing Clocks - Nearest Hour

Questions Draw the hour hand on the clock below to show the correct time

1) 

2) 
1:00

3) 
5:00

4) 
1:00

5) 
3:00

6) 
10:00

7) 
8:00

8) 
7:00

Name: _____ 149

Curriculum Connection
K2.6

Drawing Clocks - Half Past

Part 1 Draw the hour hand on the clocks below to show the correct time

1)

:30

2)

9:30

3)

1:30

4)

7:30

Part 2 Draw the minute hand on the c[illegible] below [illegible]he correct time

1)

2:30

2)

12:30

3)

11:30

4)

6:30

Name: _____ 151

Curriculum Connection
K2.6

Telling Time - Quarter To, Quarter After

Quarter To

Quarter After

Questions Is the time - Quarter To or Quarter After? Circle the answer

1)

Quarter To Quarter After

2)

Quarter To Quarter After

3)

Quarter To Quarter After

4)

Quarter To Quarter After

5)

Quarter To Quarter After

6)

Quarter To Quarter After

7)

Quarter To Quarter After

8)

Quarter To Quarter After

9)

Quarter To Quarter After

10)

Quarter To Quarter After

11)

Quarter To Quarter After

12)

Quarter To Quarter After

Name: _____ 152

Curriculum Connection
K2.6

Telling Time - Quarter To, Quarter After

Questions What time is it? Write the times on the digital clocks below

1) 

:15

2) 

:15

3) 

:45

4) 

:45

5) 

:

6) 

:

7) 

:

8) 

:

Name: _____ 154

Curriculum Connection
K2.4

Drawing Clocks - Quarter To, Quarter After

Questions Draw the hour and minute hand to show what time it is

1) 

2) 

2:15

3) 

4:15

4) 

6:15

5) 

5:45

6) 

3:15

7) 

8:45

8) 

7:45

Name: _____ 155

Curriculum Connection
K2.4

Telling Time - Every 5 Minutes

Questions Read the clock and write the time below

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

10) 

11) 

12) 

Name: _____ 157

Curriculum Connection
K2.6

Telling Time - Multiple Choice

Questions Circle the time showing on the clock

1)

- 09:50
- 11:50
- 09:55

2)

- 02:30
- 06:10
- 01:30

3)

- 01:40

4)

- 11:25
- 11:50
- 05:55

5)

- 07:45
- 09:35
- 06:45

6)

- 05:35

7)

- 03:45
- 02:40
- 08:15

8)

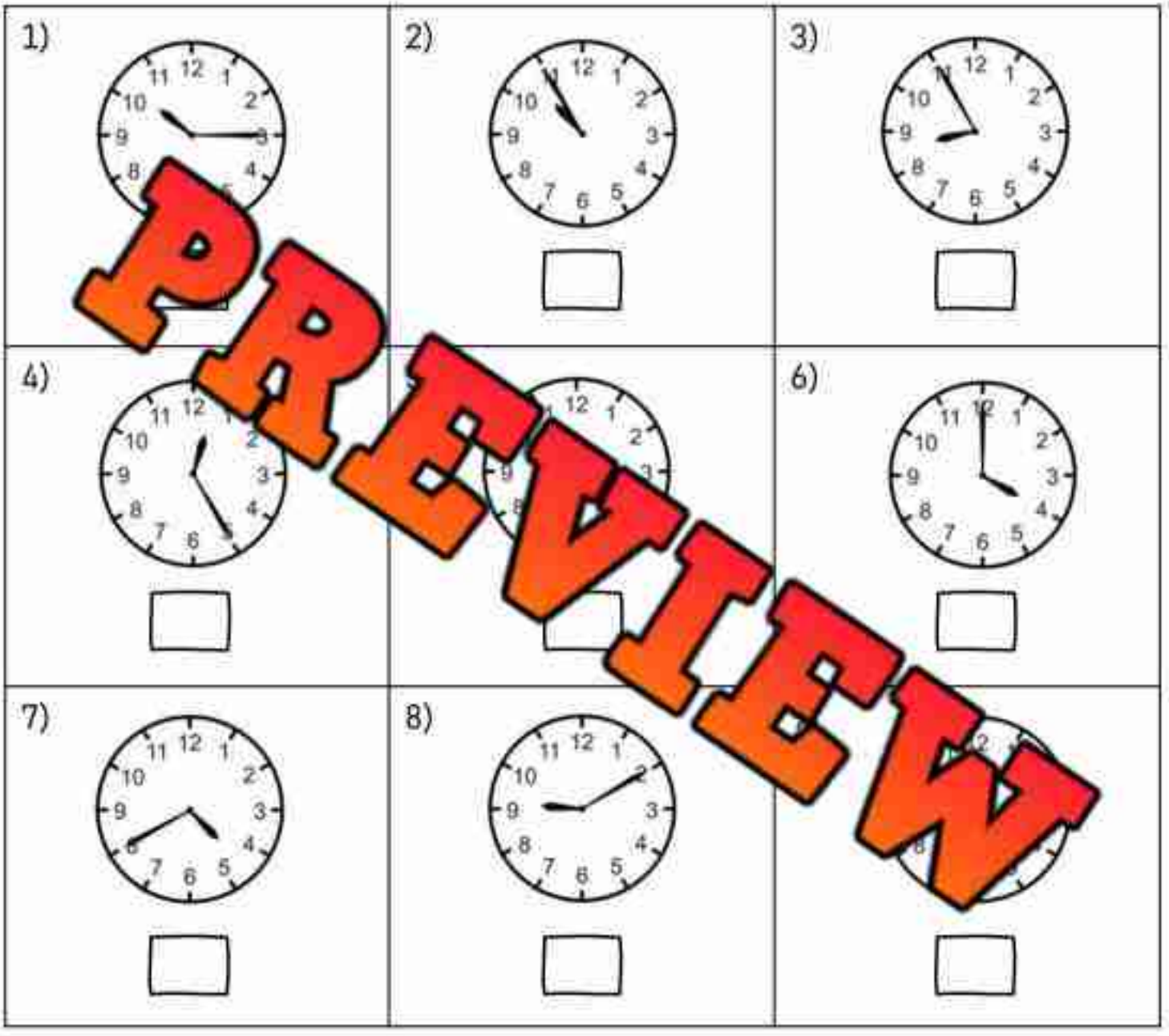
- 10:30
- 03:45
- 10:15

Name: _____ 158

Curriculum Connection
K2.6

Telling Time - Multiple Choice

Questions Write the letter from below under each clock



Ⓐ 10 : 55 Ⓑ 4 : 40 Ⓒ 9 : 45 Ⓓ 12 : 25 Ⓔ 10 : 15

Ⓕ 8 : 50 Ⓖ 9 : 10 Ⓗ 4 : 00 Ⓘ 11 : 20

Name: _____ 160

Curriculum Connection
K2.6

Telling Time - Every Minute

Questions Draw the hour and minute hands on the clocks below

1) 

2) 

6:37

3) 

1:21

4) 

9:08

5) 

9:59

6) 

10:42

7) 

7:14

8) 

12:39

Name: _____ 161

Curriculum Connection
K2.6

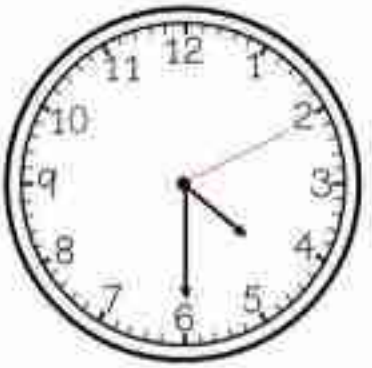
Telling Time - Seconds

Questions What time is showing on the clock?

1)

: :

2)



: :

3)

: :

: :

5)

: :

6)

: :

Name: _____ 162

Curriculum Connection
K2.6

Telling Time - Seconds

Questions What time is showing on the clock?

1) 

2) 

: :

3) 

: :

: :

5) 

: :

6) 

: :

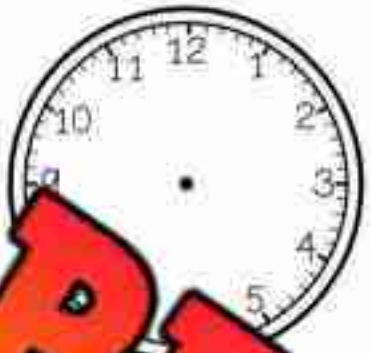
Name: _____ 163

Curriculum Connection
K2.6

Telling Time - Seconds

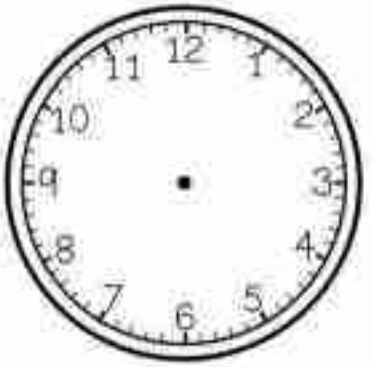
Questions Draw the hour, minute, and second hands to represent the time

1)



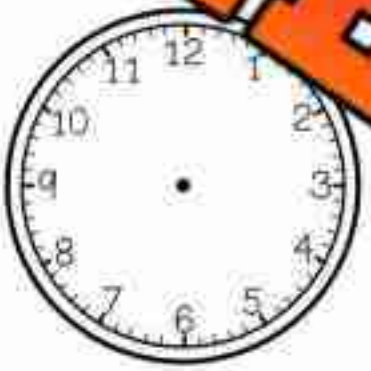
5

2)

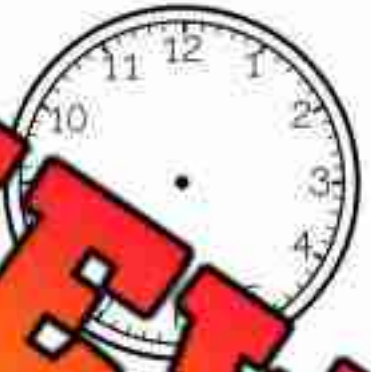


8:30:35

3)

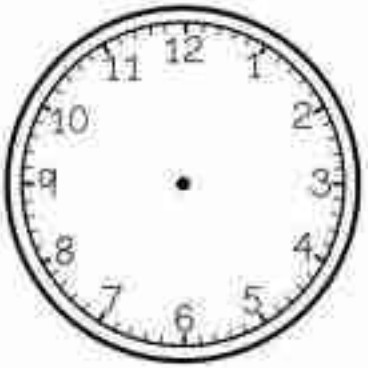


2:05:45



12:

5)



7:55:10

6)

3:40:50

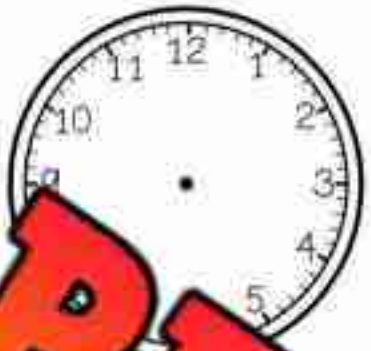
Name: _____ 164

Curriculum Connection
K2.6

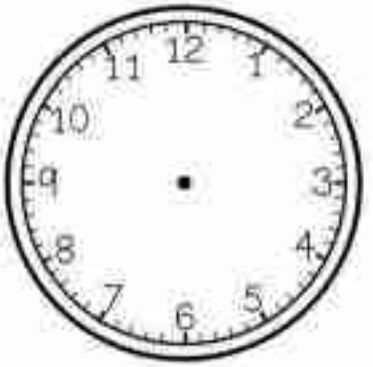
Telling Time - Seconds

Questions Draw the hour, minute, and second hands to represent the time

1)

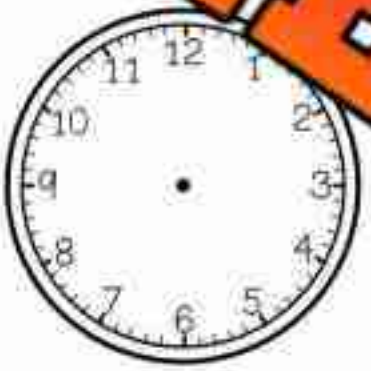


2)

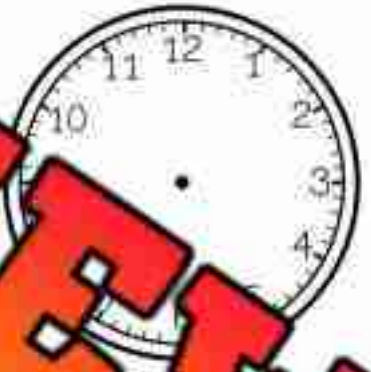


4:33:38

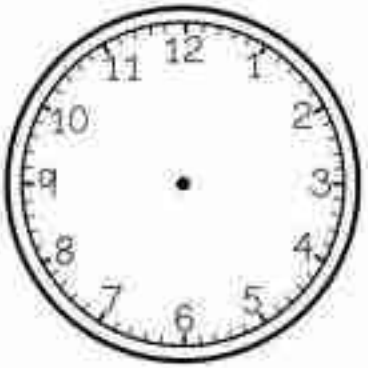
3)



7:08:41



5)



9:58:17

6)

10:44:56

Name: _____ 165

Curriculum Connection
T1

Time - AM and PM

AM	PM
• An abbreviation of the Latin phrase ante meridiem (a.m.) • Means before midday (before noon)	• An abbreviation of the Latin phrase post meridiem (p.m.) • Means after midday (after noon)

Part 1 Circle the correct option

	Description	AM	PM
1)	We ... the...	AM	PM
2)	... break ...	AM	PM
3)	Steven ... at ...	AM	PM
4)	Dennis wor... rrow ... 8:30...	AM	PM
5)	Erica saw the star...	AM	PM
6)	Charlie goes to school ...	AM	PM
7)	Ryan has basketball practice af... er at ...	AM	PM

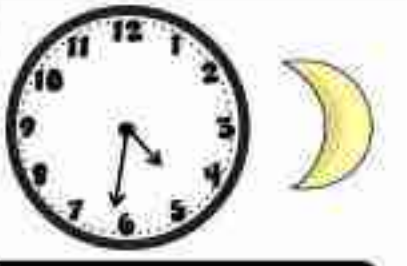
Part 2 Fill in the time using a.m. or p...

1)  : am / pm

2)  : am / pm

 : am / pm

4)  : am / pm

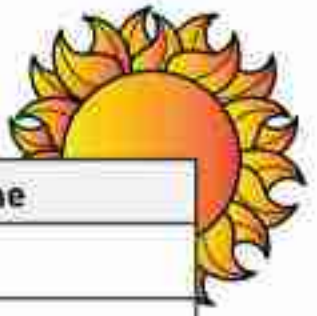
5)  : am / pm

6)  : am / pm

Name: _____ 167

Curriculum Connection
E2.4

24-Hour Clock



Part 1 Convert the time by filling in the table

	24-Hour Time	12-Hour Time
1)	15:00	
2)	17:30	
3)	3:10	
		2:00pm
		8:15am
6)		10:00pm
7)		
8)		
9)		6:07pm
10)	7:57	

Part 2 Answer the questions below

	Questions	
1)	Hunter's plane leaves at 19:25. What time in AM/PM does Hunter's plane leave?	
2)	Stacey is taking a train at 4:45pm. What time in 24-hour time is the train leaving?	
3)	The baseball game is on at 10:15pm tonight. What time in 24-hour time is the game on at?	
4)	The surgery is planned for 15:27. What time is the surgery in 12-hour time?	
5)	The movie starts at 7:15pm. What time in 24-hour time is the movie starting?	

Name: ______________________ 168

Curriculum Connection
T.1

Unit Test - Telling Time

Part 1 Read the clock and write the time below

1)

____ : ____

2)

____ : ____

3)

____ : ____

4)

____ : ____

5)

____ : ____

6)

____ : ____

Part 2 Convert the units of measurement below

	Minutes	Hours
1)	60	
2)		2
3)	180	
4)	240	
5)		5

	Minutes	Ho
7)	150	____hours ______mins
8)	195	____hours ______mins
9)	262	____hours ______mins
10)	345	____hours ______mins
11)	400	____hours ______mins

Part 3 Convert the units of measurement below

1) 2 hr	_____min	5) 300 mins	_____hr	9) 4 d	_____hrs
2) 360 sec	_____min	6) 48hrs	_____d	10) 240 min	_____hrs

Part 4 Draw the hour and minute hands on the clocks below

1)

1:1

2)

5:39

3)

3:28

1

Part 5 Convert the time by filling in the table

	24-Hour Time	12-Hour Time
1)	13:00	
2)	15:30	
3)	5:10	
4)		3:00pm
5)		9:25pm