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Google Slides Lessons Preview

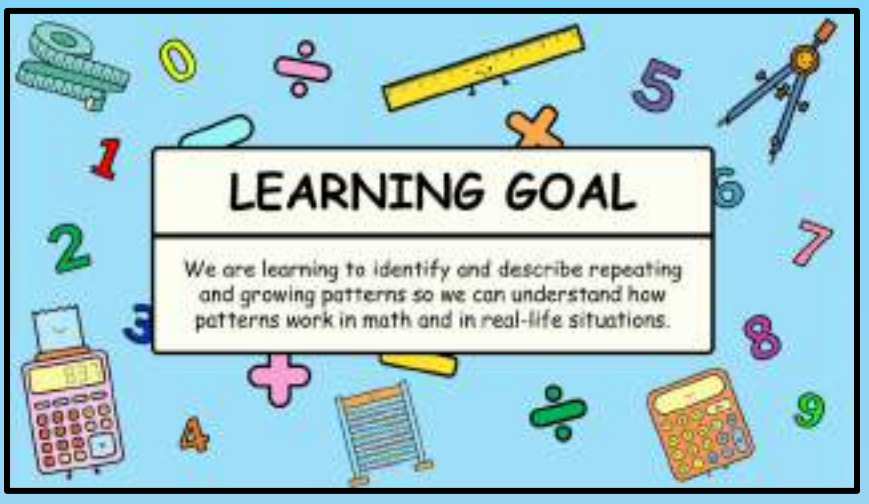
Ontario Math Curriculum

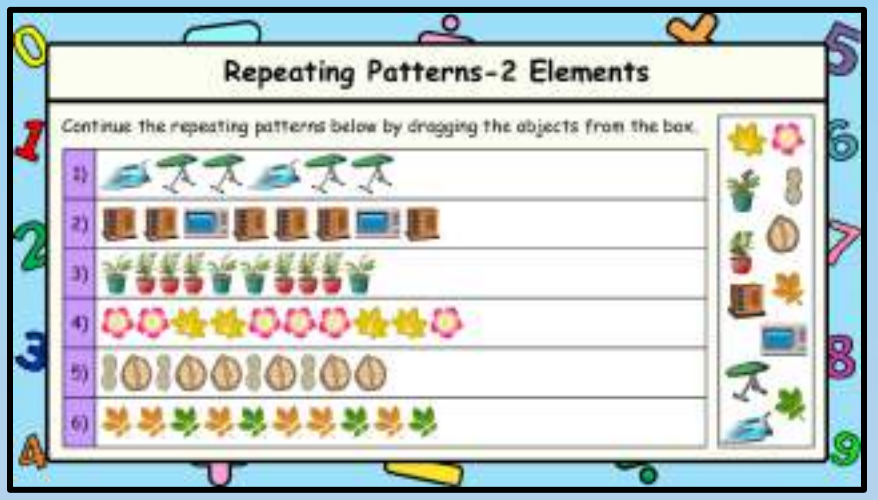
Algebra – Patterns, Equations – Grade 5

3-Part Lesson Format

Part 1 – Minds On!

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



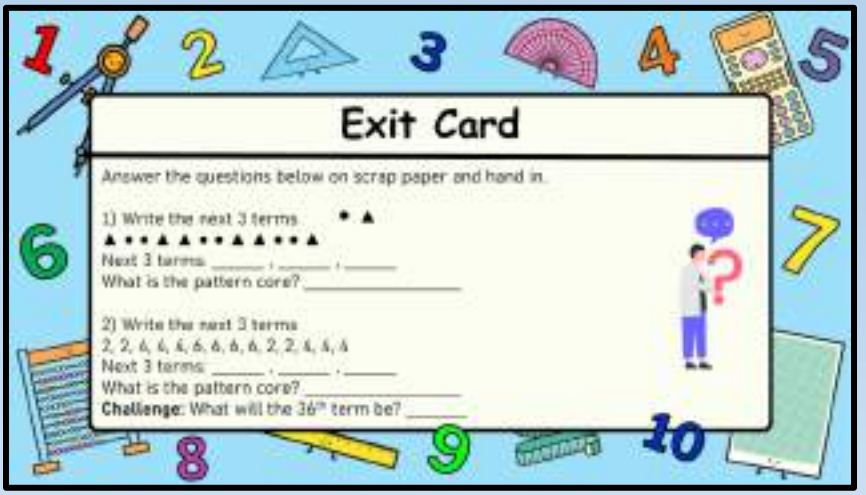


Part 2 – Action!

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

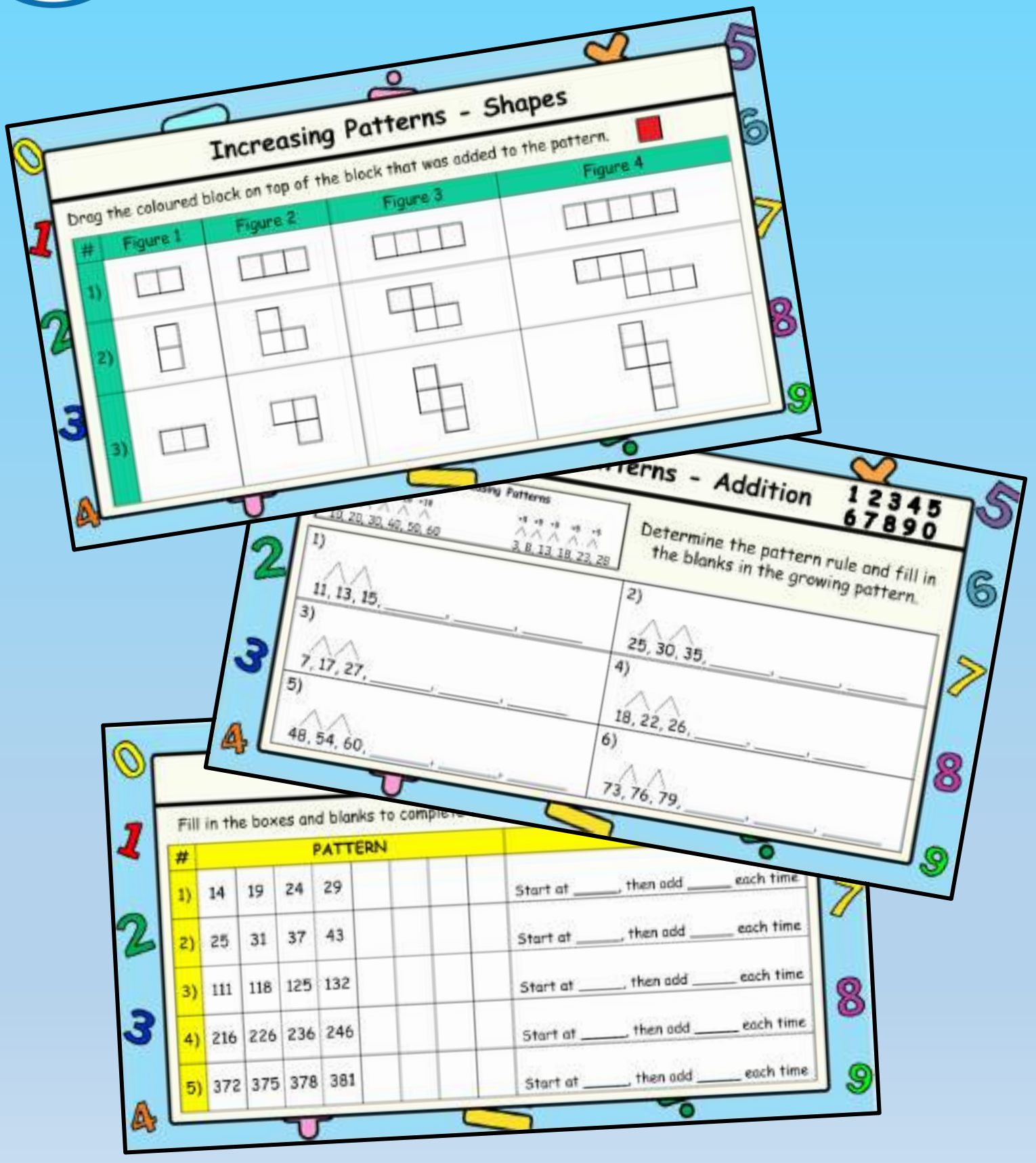
Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!



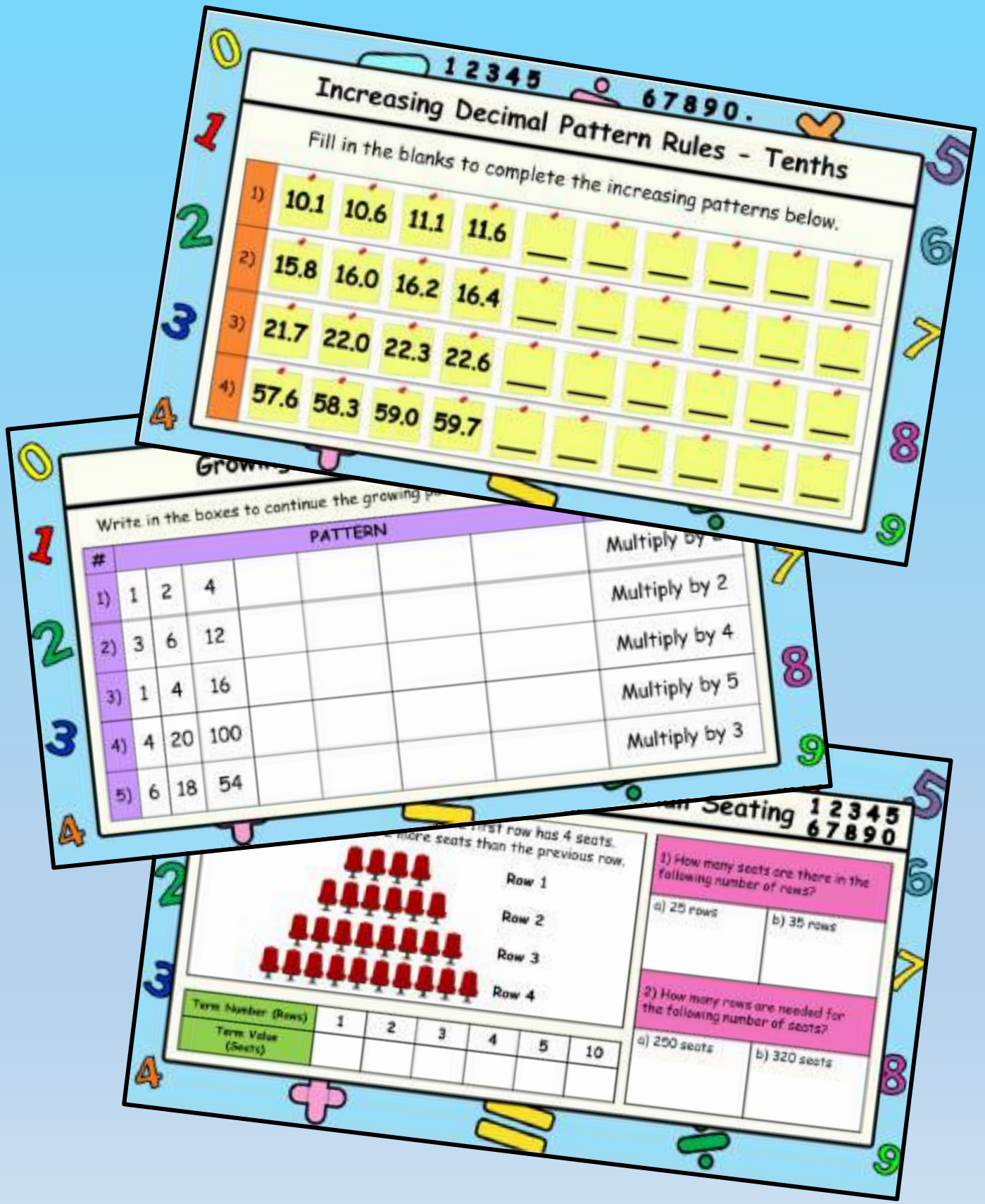
Ontario Math Curriculum

Algebra – Patterns, Equations – Grade 5



Ontario Math Curriculum

Algebra – Patterns, Equations – Grade 5



Workbook Preview

Grade 5
C1. Patterns and Relationships

	Curriculum Expectations	Pages That Cover the Expectations
C1.1	identify and describe repeating and growing patterns, including patterns found in real-life contexts	5 - 15
C1.2		69,
C1.3	determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in repeating and growing patterns	18 – 42, 55 – 56, 62 - 79
C1.4	create and describe patterns to illustrate relationships among whole numbers and decimal tenths	22 – 25, 28 – 33, 43 - 54

Name: _____ 9

Curriculum Connection
C1.1

Repeating A/B Patterns

Instructions Label the A/B/C patterns below and then continue the pattern

1) 

A A B A B

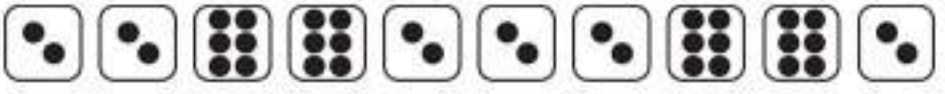
2) 

3) 

4) 

5) 

6) 

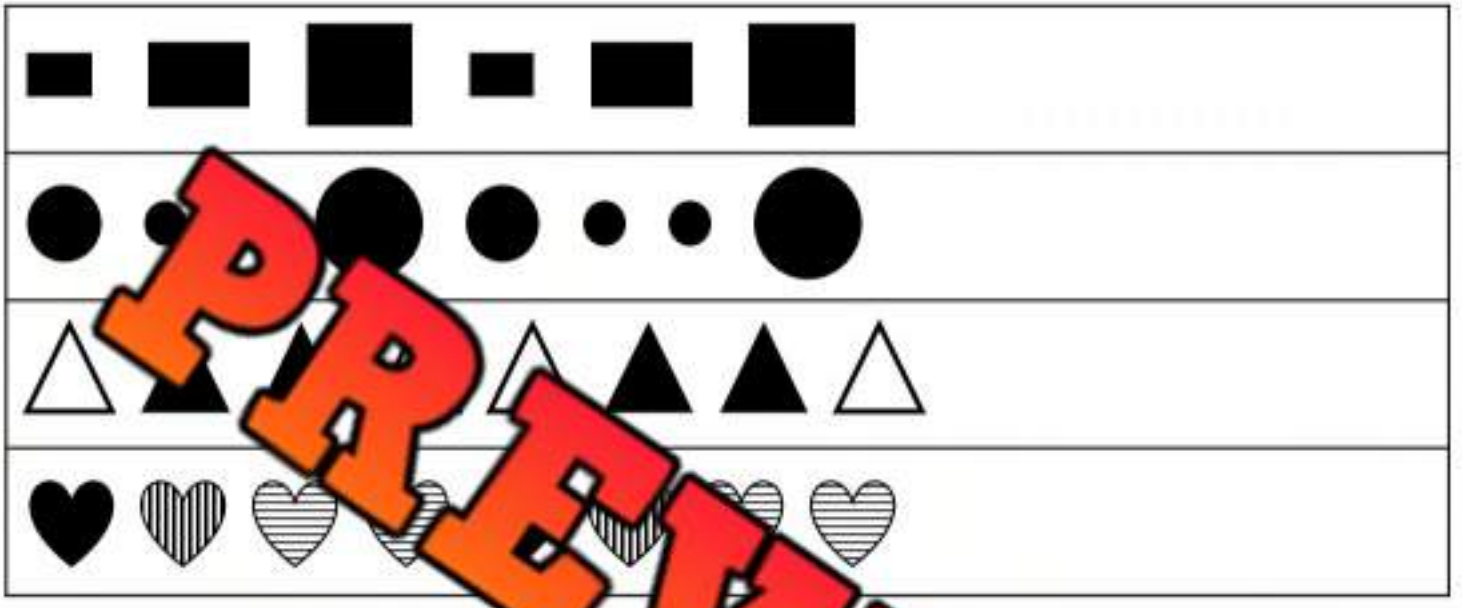
7) 

Name: _____ 11

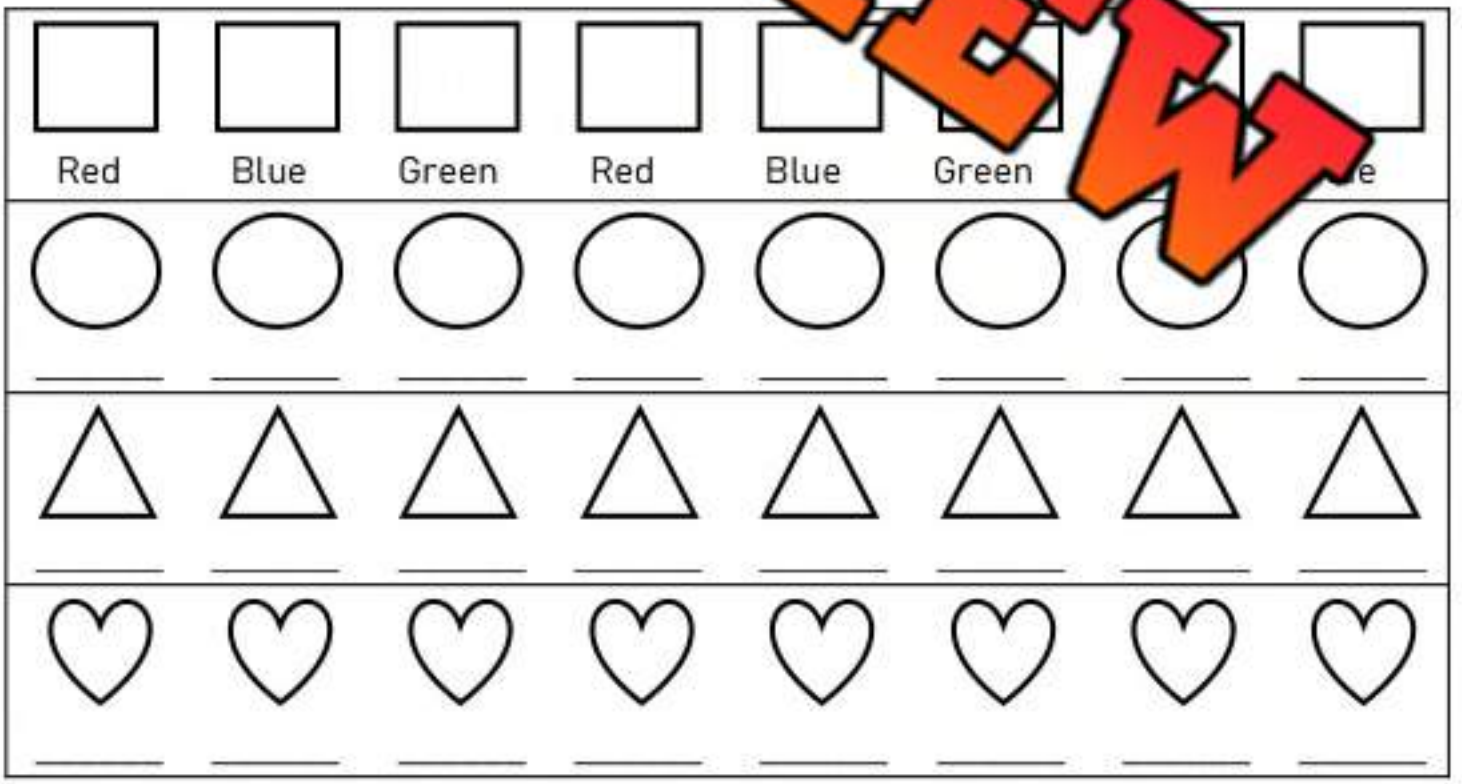
Curriculum Connection
C1.1

Repeating Patterns – Pattern Core

Part 1 Circle the pattern core and then continue the pattern



Part 2 Create a repeating pattern colouring the shapes. Label the colours underneath



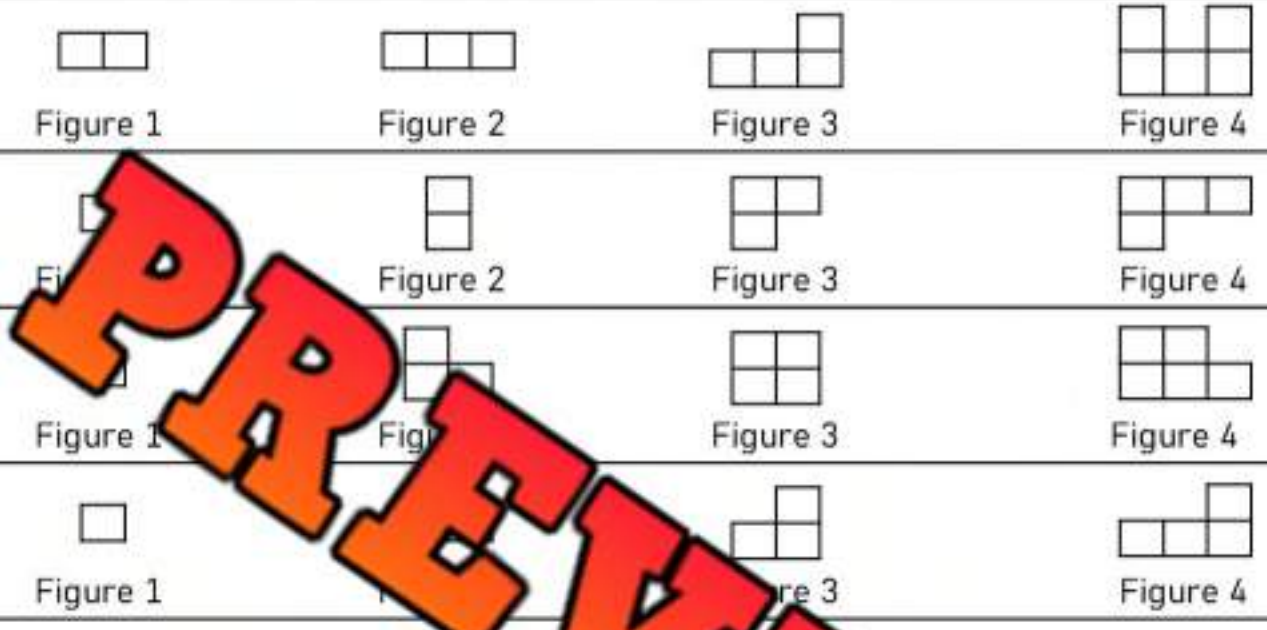
Name: _____ 14

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



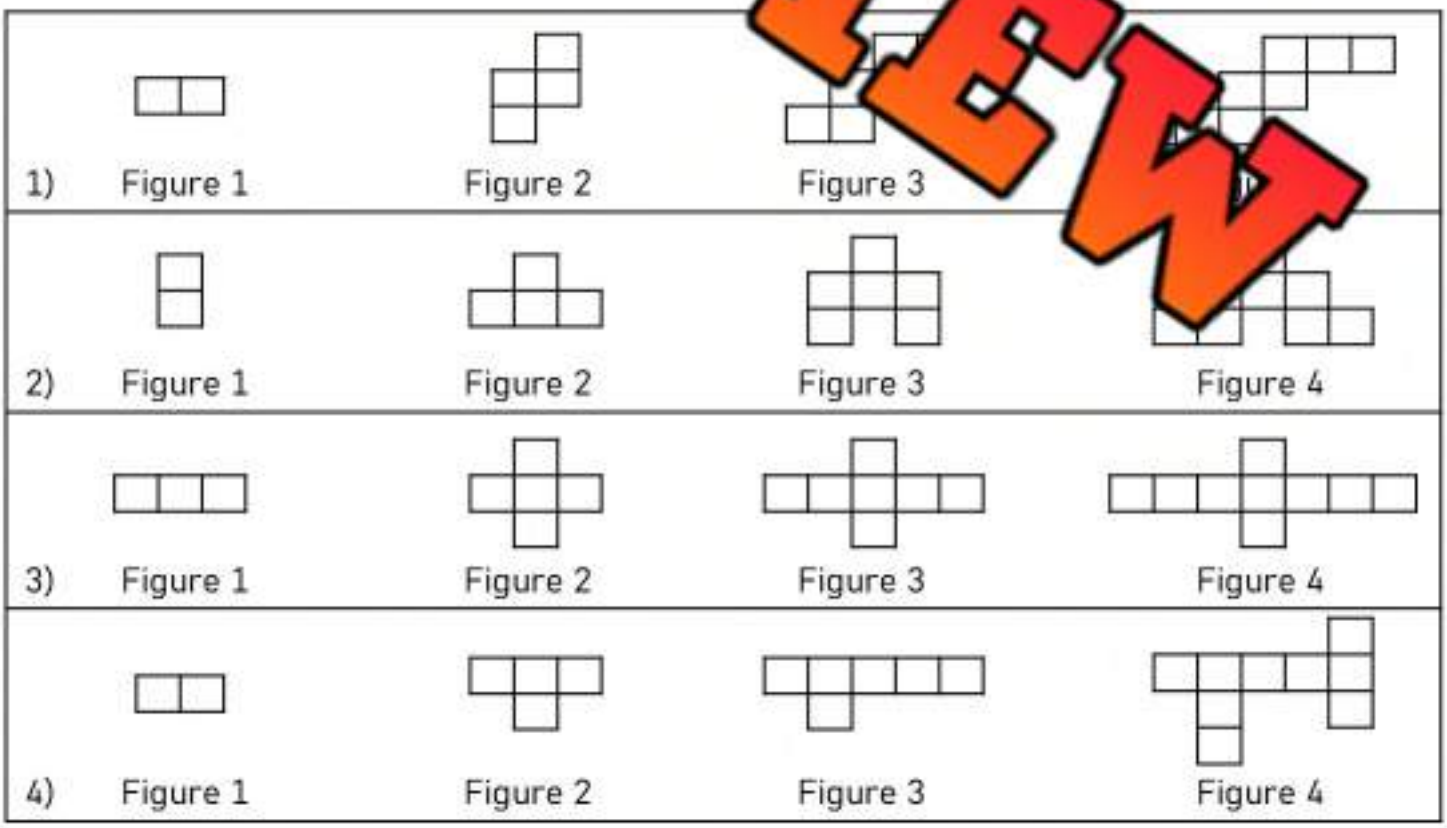
2) Figure 2 Figure 3 Figure 4

3) Figure 3 Figure 4

4) Figure 1 Figure 4

Part 2 Shade in the two blocks [illegible] pattern

1) Figure 1 Figure 2 Figure 3



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: _____ 15

Curriculum Connection
C1.1, C1.2

Increasing Patterns – Shapes

Part 1 Draw the next figure in the pattern by adding one block

1) Figure 1 Figure 2 Figure 3 Figure 4

2) Figure 1 Figure 2 Figure 3 Figure 4

3) Figure 1 Figure 3 Figure 4

4) Figure 1 Figure 2 Figure 4

Part 2 Draw the next figure by adding two [illegible] added blocks

1) Figure 1 Figure 2 Figure 3 Figure 4

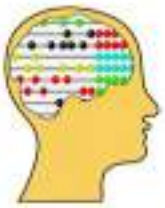
2) Figure 1 Figure 2 Figure 3 Figure 4

3) Figure 1 Figure 2 Figure 3 Figure 4

Name: _____ 18

Curriculum Connection
C1.3

Increasing Addition Patterns



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 Increasing Patterns - Addition

1) 2, 4, 6, _____, _____, _____	2) 16, 20, 24, _____, _____, _____
3) 25, 32, 39, _____, _____, _____	72, _____, _____, _____
5) 142, 150, 158, _____, _____, _____	6) 182, _____, _____, _____

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

1) (Add 2) 17, 19, 21, _____, _____, _____	2) (Add 4) 22, 26, 30, _____, _____, _____
3) (Add 6) 63, 69, 75, _____, _____, _____	4) (Add 5) 102, 107, 112, _____, _____, _____
5) (Add 10) 177, 187, 197, _____, _____, _____	6) (Add 4) 147, 151, 155, _____, _____, _____

Name: _____ 21

Curriculum Connection
C1.3

Increasing Pattern Rules - Adding

Part 1 Continue the increasing patterns below

1) 40, 50, 60, _____, _____, _____

Pattern Rule: Start at 40, add _____ each time

2) 22, 30, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

3) 55, 51, _____, _____, _____

Pattern Rule: Start at _____ each time

4) 120, 144, 168 , _____, _____, _____

Pattern Rule: Start at _____ each time

5) 213, 221, 229, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

Part 2 Write your own patterns using the pattern rule

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

Pattern Rule: Start at 36, add 4 each time

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

Pattern Rule: Start at 535, add 0 each time

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

Pattern Rule: Start at 211, add 6 each time

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

Pattern Rule: Start at 302, add 12 each time

Name: _____ 22

Curriculum Connection
C1.3, C1.4

Increasing Decimal Pattern Rules - Tenths

Part 1 Increasing Patterns - Tenths

1) 6.0, 8.0, 10.0, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 6.0, add 2.0 each time.

2) 5.7, 5[illegible]1, _____, _____, _____, _____, _____, _____, _____

Patte[illegible] _____

3) 8.5, [illegible].0, 9[illegible] _____, _____, _____, _____, _____, _____

Pattern Rule: _____

4) 14.1, 15.2, 16.3, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

5) 34.2, 34.3, 34.4, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

Part 2 Fill in the boxes below by continuing the int[illegible] pa[illegible]

1)	76.2	76.4	76.6				
2)	103.3	103.8	104.3				
3)	132.1	132.8	133.5				

Name: _____ 23

Curriculum Connection
C1.3, C1.4

Increasing Decimal Number Patterns - Tenths

Part 1 Continue the increasing patterns below

1) 1.1, 1.2, 1.3, _____, _____, _____

Pattern Rule: Start at 1.1, add 0.1 each time

2) 4.1, 5.1, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

3) 13.5, 14.0, 14.5, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

4) 50.3, 52.3, 54.3, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

5) 105.3, 105.4, 105.5, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

Part 2 Write your own patterns using the pattern rule

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

Pattern Rule: Start at 10.0, add 1.0 each time

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

Pattern Rule: Start at 22.5, add 0.5 each time

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

Pattern Rule: Start at 52.1, add 1.1 each time

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

Pattern Rule: Start at 100.0, add 2.5 each time

Name: _____ 24

Curriculum Connection
C1.3, C1.4

Increasing Decimal Pattern Rules - Hundredths

Part 1 Increasing Patterns - Hundredths

1) 8.01, 8.02, 8.03, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 8.01, add 0.01 each time.

2) 4.75, [illegible] 4.85, _____, _____, _____, _____, _____, _____, _____

Patte[illegible] _____

3) 15.[illegible], 15.5[illegible] _____, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

4) 34.11, 35.22, 36[illegible] _____, _____, _____, _____, _____, _____

Pattern Rule: _____

5) 61.51, 62.52, 63.53, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

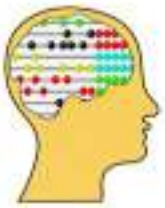
Part 2 Fill in the boxes below by continuing the in[illegible]g p[illegible]

1)	82.25	82.50	82.75				
2)	100.33	100.66	100.99				
3)	142.12	142.14	142.16				

Name: _____ 26

Curriculum Connection
C1.3

Decreasing Subtraction Patterns



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) 22, 18, 14, _____, _____, _____	2) 46, 40, 34, _____, _____, _____
3) 67, 62, 57, _____, _____, _____	4) 97, _____, _____, _____, _____, _____
5) 141, 135, 129, _____, _____, _____	6) 184, _____, _____, _____, _____, _____

Part 2 Follow the rule by subtracting the next number in

1) (Subtract 3) 21, 18, 15, _____, _____, _____	2) (Subtract 6) 42, 36, 30, _____, _____, _____
3) (Subtract 5) 64, 59, 54, _____, _____, _____	4) (Subtract 4) 142, 138, 134, _____, _____, _____
5) (Subtract 2) 177, 175, 173, _____, _____, _____	6) (Subtract 10) 218, 208, 198, _____, _____, _____

Name: _____ 30

Curriculum Connection
C1.3, C1.4

Shrinking Decimal Patterns - Tenths

Part 1 Decreasing Patterns - Tenths

1) 9.0, 8.0, 7.0, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 9.0, subtract 1.0 each time.

2) 13.3, 12.3, 11.3, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

3) 18.[illegible] 18.0, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

4) 15.9, 15.8, 15.7, _____, _____, _____, _____, _____

Pattern Rule: _____

5) 17.8, 17.6, 17.4, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

Part 2 Fill in the boxes below by continuing the [illegible]

1)	19.8	19.2	18.6				
2)	27.9	27.4	26.9				
3)	32.5	31.8	31.1				

Name: _____ 32

Curriculum Connection
C1.3, C1.4

Decreasing Decimal Number Patterns - Hundredths

Part 1 Decreasing Patterns - Hundredths

1) 6.50, 6.45, 6.40, _____, _____, _____, _____, _____, _____, _____

Pattern Rule: Start at 6.50, subtract 0.05 each time.

2) 0.99, [illegible] 0.97, _____, _____, _____, _____, _____, _____

Patte[illegible] _____

3) 1.1[illegible]1.09, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

4) 18.95, 18.93, 18[illegible], _____, _____, _____, _____, _____, _____

Pattern Rule: _____

5) 22.18, 22.16, 22.14, _____, _____, _____, _____, _____, _____

Pattern Rule: _____

Part 2 Fill in the boxes below by continuing the d[illegible]g p[illegible]

1)	15.02	15.01	15.00				
2)	24.78	24.76	24.74				
3)	48.88	48.80	48.72				

Name: _____ 34

Curriculum Connection
C1.3

Increasing Patterns - Multiplication

x2 x2 x2
2, 4, 8, 16, 32, 64
Pattern Rule: Start at 2, multiply by 2 each time.

Question | Increasing Patterns - Multiplication

1) 1, _____, _____, _____, _____, _____ Pattern Rule: _____	5) 1, 5, 25, _____, _____, _____ Pattern Rule: _____
2) 1, 3, 9, _____, _____, _____ Pattern Rule: _____	6) 1, 1[illegible] _____, _____, _____ P[illegible] Rule _____
3) 1, 4, 16, _____, _____, _____ Pattern Rule: _____	7) 10, 20, 40, _____ Pattern Rule: _____
4) 2, 6, 18, _____, _____, _____ Pattern Rule: _____	8) 10, 30, 90, _____, _____, _____ Pattern Rule: _____

Name: _____ 36

Curriculum Connection
C1.3

Pattern Rules - Multiplication

x3 x3 x3

2, 6, 18, 54, 162, 486

Pattern Rule: Start at 2, multiply by 3 each time.

Instructions: Fill in the rules

2, 4, 8, 16, 32, 64

Start at _____, multiply by _____ each time

27, 81, 243, 729

Start at _____, multiply by _____ each time

1, 5, 25, 125, 625

Start at _____, multiply by _____ each time

5, 10, 20, 40, 80, 160, 320

Start at _____, multiply by _____ each time

1, 10, 100, 1000, 10000, 100000

Start at _____, multiply by _____ each time

6, 18, 54, 162, 486, 1458

Start at _____, multiply by _____ each time

Name: _____ 37

Curriculum Connection
C1.3

Pattern Rules - Multiplication

Instructions Write your own sequences using the pattern rule

1) _____, _____, _____, _____, _____

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

2) _____, _____, _____, _____, _____

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

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 10, multiply by [illegible] each time

4) _____, _____, _____, _____, _____

Pattern Rule: Start at 8, multiply by 2 each time

5) _____, _____, _____, _____, _____

Pattern Rule: Start at 3, multiply by 3 each time

Name: _____ 38

Curriculum Connection
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 y... ...mple... ...tivity

1. Prepare a list of questions with ...nswer ...s labeled A, B, C, and D.
2. Explain the finger signals for each answ... ...ice: ... for A, two fingers for B, three fingers for C, and four fingers ... D.
3. Inform the students they will show their answer ... fi... ...n ...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: _____ 39

Curriculum Connection
C1.3

Question	A	B	C	D
Start with 2. What is the fifth number in the doubling pattern?	16	32	64	128
If the pattern starts at 3, what will the fourth number be when doubling?	24	27	48	54
Which number comes next in the pattern: 5, 10, 20, ___?	30	40	50	60
What is the [illegible] number in the doubling [illegible] starting with 6?	6	12	18	24
Start [illegible] is [illegible] enth number [illegible] e doub [illegible] n?	32	64	128	256
Which number [illegible] in the pattern: 8, 16, 32, _	48	64	80	96
Which pattern starts with [illegible] follows a doubling sequence	[illegible]	10, 15, 20, 25	10, 30, 50, 70	10, 20, 40, 80
If the pattern starts at 11, what will the sixth number be?	[illegible]	[illegible]	352	704
Which sequence is a doubling pattern starting with 12?	12, 24, 48	[illegible]2, 36, [illegible]	[illegible]24, 48, [illegible]	12, 48, 96, 192
What is the doubling pattern that starts with 13 and ends with 208?	13, 26, 52, 104, 208	13, [illegible] 52, [illegible]	13, [illegible] [illegible]	[illegible]3, 26, 78, [illegible]208
Which number comes next in the pattern: 14, 28, 56, ___?	70	84	[illegible]98	112
What is the doubling pattern that starts with 15 and ends with 240?	15, 30, 60, 120, 240	15, 45, 90, 180, 240	15, 60, 120, 180, 240	15, 30, 90, 120, 240
Which pattern shows a correct doubling sequence starting with 16?	16, 32, 64, 128	16, 48, 96, 192	16, 64, 128, 256	16, 32, 96, 192
What do you think is the easiest way to find the next number in a doubling pattern?	Add	Multiply	Subtract	Divide
Why do you think doubling patterns are important in math?	Easy to remember	Common in nature	Used in real life	All of the above

Curriculum Connection
C1.3

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 2)

2, 4, 8, _____, _____, _____

2) 9, 45, 225, 1125, 5625, 28125

Start at ____, multiply by ____ each time

3) ____, ____, ____, ____

Pattern Rule: Start at 3, multiply by 5 each time.

Name: ____________________

Growing Multiplication Patterns

1) (Multiply by 2)

2, 4, 8, _____, _____, _____

2) 9, 45, 225, 1125, 5625, 28125

Start at ____, multiply by ____ each time

3) ____, ____, ____, ____

Pattern Rule: Start at 3, multiply by 5 each time.

Name: ____________________

Growing Multiplication Patterns

1) (Multiply by 2)

2, 4, 8, _____, _____, _____

2) 9, 45, 225, 1125, 5625, 28125

Start at ____, multiply by ____ each time

3) ____, ____, ____, ____

Pattern Rule: Start at 3, multiply by 5 each time.

Name: ____________________

Growing Multiplication Patterns

1) (Multiply by 2)

2, 4, 8, _____, _____, _____

2) 9, 45, 225, 1125, 5625, 28125

Start at ____, multiply by ____ each time

3) ____, ____, ____, ____

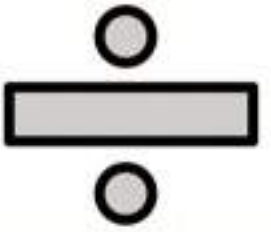
Pattern Rule: Start at 3, multiply by 5 each time.

Name: _____ 41

Curriculum Connection
C1.3

Decreasing Patterns - Division

÷2 ÷2 ÷2
32, 16, 8, 4, 2, 1
Pattern Rule: Start at 32, divide by 2 each time.



Questions Complete the decreasing patterns

1) 8[illegible]0, _____, _____, _____ Pattern Rule: _____	5) 162, 54, 18, _____, _____, _____ Pattern Rule: _____
2) 48, 24, 12, _____, _____, _____ Pattern Rule: _____	6) 128, _____, _____, _____ Pattern Rule: _____
3) 243, 81, 27, _____, _____, _____ Pattern Rule: _____	7) 160, 80, 40, _____ Pattern Rule: _____
4) 1024, 256, 64, _____, _____, _____ Pattern Rule: _____	8) 192, 96, 48, _____, _____, _____ Pattern Rule: _____

Name: _____ 45

Curriculum Connection
C1.4

Patterns Within Number Strings

Instructions How many ways can you make the number below? We've made 3 ways for you.

Original Number	Ones	Tenths	Hundredths
2.51	2	+ 5 tenths	+ 1 hundredth
2.5	2	+ 4 tenths	+ 11 hundredths
=	1	+ 15 tenths	+ 1 hundredths
2.51 =		tenths	hundredths
2.51 =		tenths	hundredths
2.51 =		tenths	hundredths
2.51 =		s	hundredths
2.51 =		enth	hundredths

Original Number	Ones	Ten	ndredths
6.76 =		tenths	s
6.76 =		tenths	dredths
6.76 =		tenths	hundredths
6.76 =		tenths	hundredths
6.76 =		tenths	hundredths
6.76 =		tenths	hundredths
6.76 =		tenths	hundredths
6.76 =		tenths	hundredths

Name: _____ 46

Curriculum Connection
C1.4

Patterns Within Number Strings – Gattegno Chart

Instructions Follow the instructions below

Create a four-digit number with two decimal places (e.g., 123.45).	
Use counters to cover each digit of your number on chart below.	
Multiply your number by 10. Move each counter up one row but keep it in the same column.	
Predict what will happen if you multiply your new number by 10 again.	
Multiply by 10 to check your prediction. Move each counter up one more row.	
Think about how to return to the original number using division. Try it!	
From your original number, move each counter up two rows. What happens when you divide by 100?	

10 000	20 000	30 000	40 000	50 000	60 000	70 000	80 000	90 000
1000	2000	3000	4000	5000	6000	7000	8000	9000
100	200	300	400	500	600	700	800	900
10	20	30	40	50	60	70	80	90
1	2	3	4	5	6	7	8	9
0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
00.1	00.2	00.3	00.4	00.5	00.6	00.7	00.8	00.9

Name: _____ 47

Curriculum Connection
C1.4

Patterns Within Number Strings

Instructions Follow the instructions below

Use the following chart to make 60 in as many ways as you can.
Use a number from column A.
Use an op[illegible]tion from column B.
Use a nu[illegible]m column C.
Writ[illegible]nt[illegible]ations you made in the workspace below.

A	B	C
0.6		0.01
6		0.1
60		1
600	÷	10
6000		[illegible]0
60 000		[illegible]

Workspace

Name: _____ 50

Curriculum Connection
C1.4

Task Cards: Patterning – All Operations

Objective

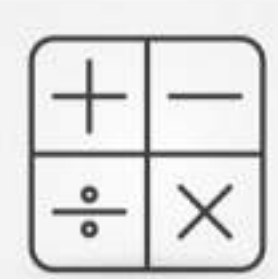
What are we learning about?

To recognize and create patterns using the four basic mathematical operations.

Materials

What you will need for the activity.

- 24 t
- S ets r for answers
- Pe



Instructions

ou w the activity

1. Introduce the concept o s in perations and their relevance to problem-solving in everyda e.
2. Organize the students into pairs an ovide e air heir sets of task cards.
3. Give each pair an answer recording sheet t do ses.
4. Encourage teamwork by having students collabora ir p on finding solutions.
5. Allow students to select any task card to begin with, emphasiz 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 patterns and strategies used to solve them.
9. Have students reflect on the activity, sharing the methods they applied and obstacles they overcame.

Name: _____ 51

Curriculum Connection
C1.4

Task Cards | Cut out the task cards below

Card 1:
Start with 5. Add 4 to get the next number in the pattern. What is the fifth number?

a) 21
b) 25
c) 29

Card 5:
Begin with 60. Subtract 5 and then divide by 5 for the next number. What is the second number?

a) 11
b) 12
c) 13

Start with [illegible] then subtract 1 fo[illegible] numb[illegible] is the sec[illegible]umb[illegible]

a) 15
b) 16
c) 17

Card 6:
Start with 20. Subtract 4 and then take away half for the next number. What is the second number?

a) 7
b) 8
c) 10

Card 3:
Start with 80. Divide by 2 to get the next number. What is the fourth number?

a) 20
b) 25
c) 10

Sta[illegible]d 2, subtract 4 to ge[illegible]t is the third [illegible]nu[illegible]

a)
b) 35
c) 33

Card 4:
Start with 7. Multiply by 3 and then add 2 for the next number. What is the second number?

a) 21
b) 23
c) 24

Card 8:
Start with 15. Divide by 3 to get the next number. What is the second number?

a) 5
b) 2
c) 8

Name: _____ 52

Curriculum Connection
C1.4

Task Cards | Cut out the task cards below

Card 9:
Start with 6. Multiply by 5 and then add 4 for the next number. What is the second number?

a) 32
b) 34
c) 36

Card 13:
Start with 12. Add 5 and then multiply by 2 to get the next number. What is the third number?

a) 34
b) 76
c) 78

Begin with [illegible] then divide by 8 fo[illegible] numb[illegible]t is the sec[illegible]umb[illegible]

a) 10
b) 15
c) 20

Card 14:
Start with 16. Add 5 to get the next number in the pattern. What is the fifth number?

a) 31
b) 36
c) 41

Card 11:
Start with 18. Subtract 2 and then take away half for the next number. What is the second number?

a) 8
b) 9
c) 10

[illegible] and then multip[illegible] get[illegible]xt number. What [illegible]thir[illegible]

a)
b) 76
c) 99

Card 12:
Start with 50. Subtract 5, add 3, subtract 5 to get the next term. What is the third term number?

a) 43
b) 37
c) 31

Card 16:
Start with 12. Multiply by 3 and then subtract 4 for the next number. What is the second number?

a) 30
b) 32
c) 34

Name: _____ 53

Curriculum Connection
C1.4

Task Cards | Cut out the task cards below

Card 17:
Start with 8. Multiply by 2 and then subtract 4 to get the next number. What is the third number?

a) 24
b) 20
c) 16

Card 21:
Start with 9. Add 3 and then multiply by 2 for the next number. What is the second number?

a) 18
b) 21
c) 24

Card 22:
Begin with 100. Subtract 10 and then divide by 2 for the next number. What is the second number?

a) 30
b) 40
c) 45

Card 19:
Start with 25. Add 10 and then multiply by 3 to get the next number. What is the third number?

a) 315
b) 105
c) 345

Card 23:
b) 14
c) 16

Card 20:
Start with 80. Divide by 4 to get the next number. What is the third number?

a) 20
b) 5
c) 10

Card 24:
Start with 15. Multiply by 2 and then subtract 5 for the next number. What is the third number?

a) 25
b) 35
c) 45

Name: _____ 54

Curriculum Connection
C1.4

Task Cards: Patterning

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: _____ 56

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 35 dollars. Fill in the table to learn more about your earnings.

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

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

Hours Worked	Money Made
1	
2	
3	
4	
5	
10	

Weeks	KM Ran
1	
2	
3	
4	
5	
10	

You are training for a marathon, so you run 21km a week.

1) How many kilometers did you run after 5 weeks?

2) How many kilometers did you run if you ran 21km for 10 weeks?

Chris is studying for a science test next week. Each night he studies for 25 minutes.

1) How many minutes does he study after 5 nights?

2) How many minutes does he study after 8 nights?

3) How many nights does he need to study for to study for 350 minutes?

Nights	Minutes
1	
2	
3	
4	
5	
8	

Name: _____ 57

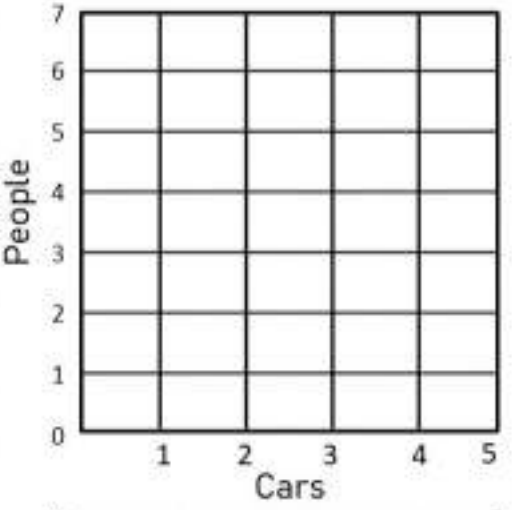
Curriculum Connection
C1.2

Graphing Increasing Patterns

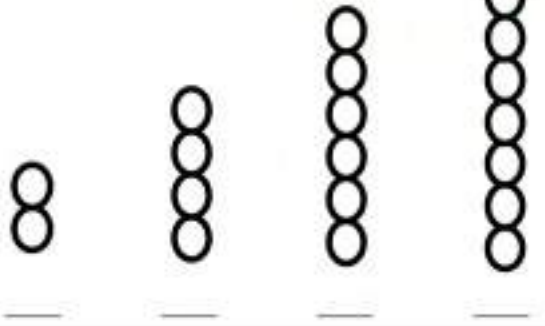
Questions Translate the increasing patterns into a table of values and a graph

1) A train has the following people in each train car.

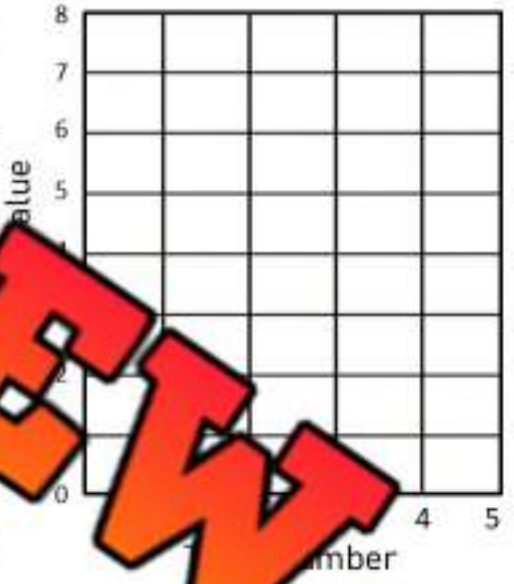
Term Number (cars)	Term Value (people)



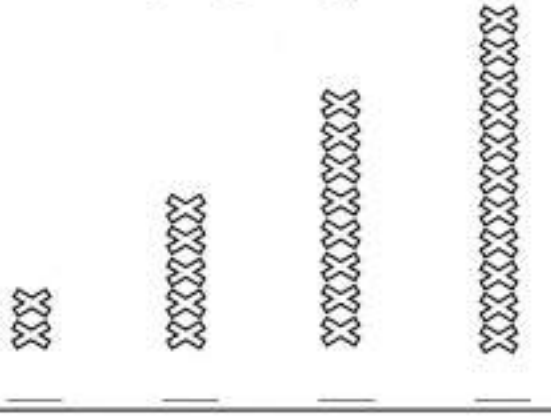
2) Fill in the table of value[illegible] by translating the growing pa[illegible]



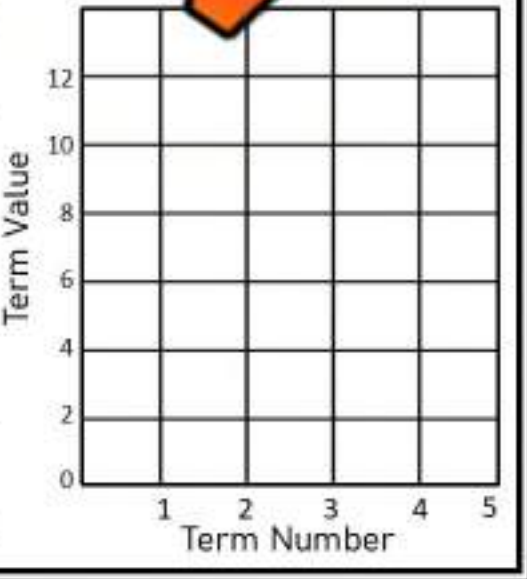
	Term Value



3) Fill in the table of values and the graph by translating the growing pattern below.



Term Number	Term Value



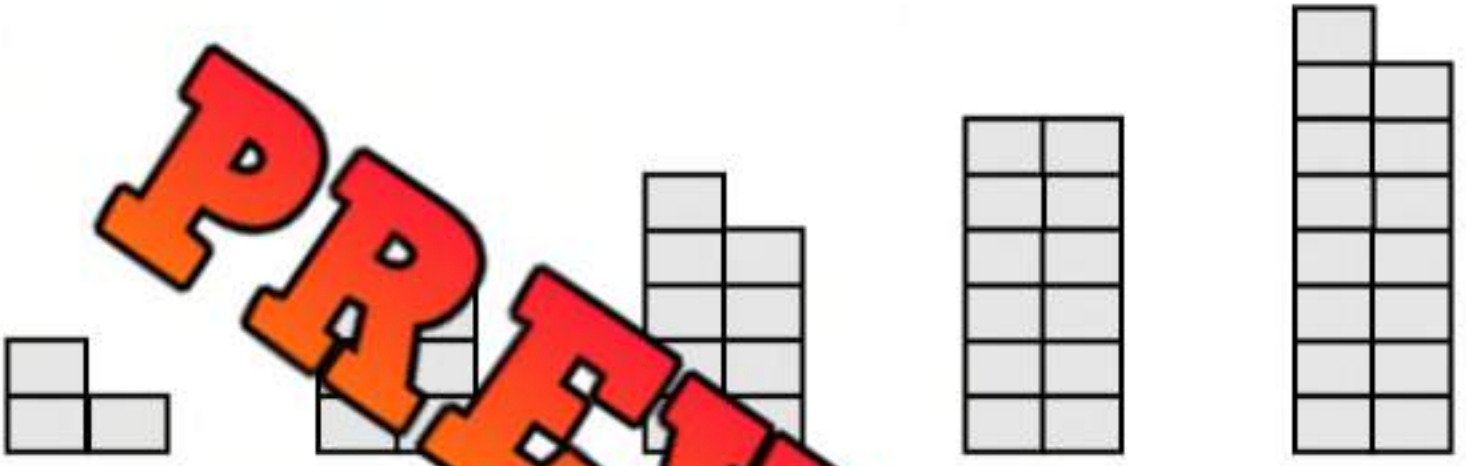
Name: _____ 58

Curriculum Connection
C1.2

Graphing Increasing Patterns

Questions | Answer the question below using a table of values and a graph

Joel has created a pattern using his blocks. Translate the pattern using the table of values and graph.



Term Number	Term Value

1) How many blocks would Joel use in his 10th shape if he continued his pattern?

2) What is the pattern rule? How much is added to the core each time?

3) Which shape would use 63 blocks?

Name: _____ 59

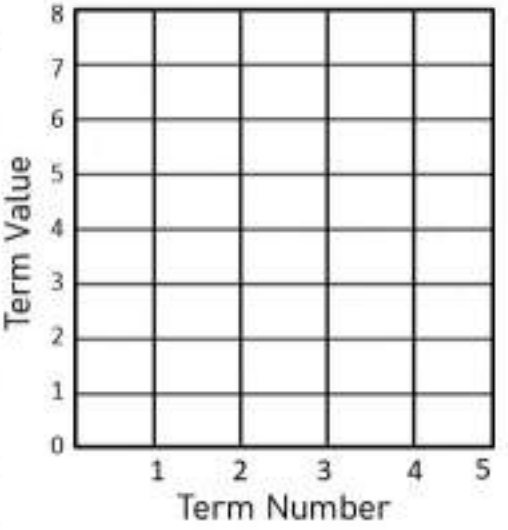
Curriculum Connection
C1.2

Graphing Shrinking Patterns

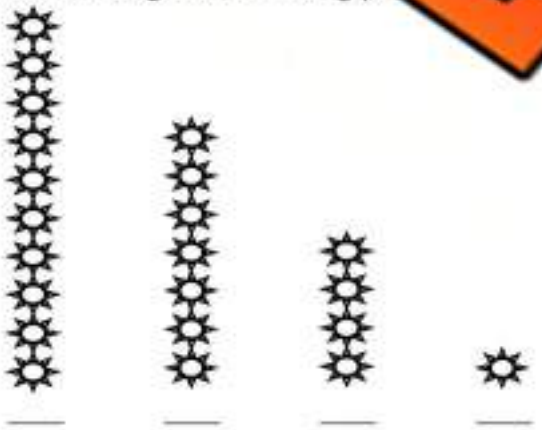
Questions Translate the shrinking patterns into a table of values and a graph

1) Fill in the table of values and the graph by translating the shrinking pattern below.

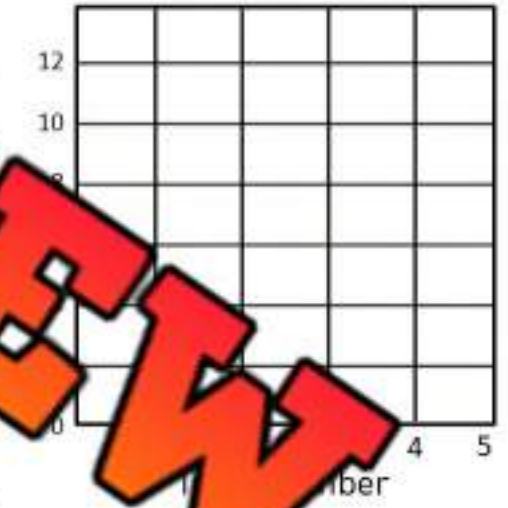
Term Number	Term Value



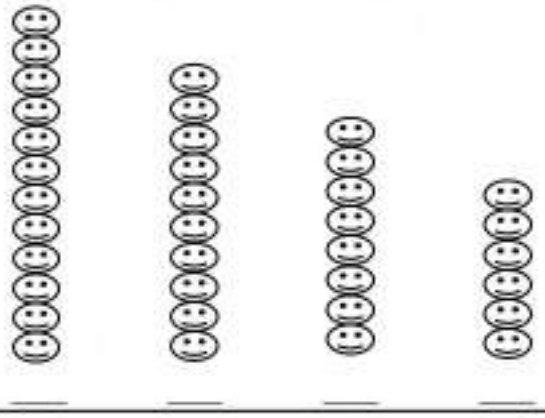
2) Fill in the table of value... by translating the shrinking pa...



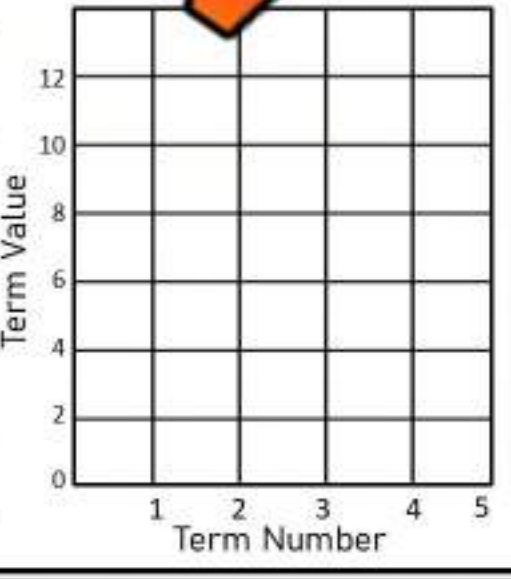
Term Number	Term Value



3) Fill in the table of values and the graph by translating the shrinking pattern below.



Term Number	Term Value



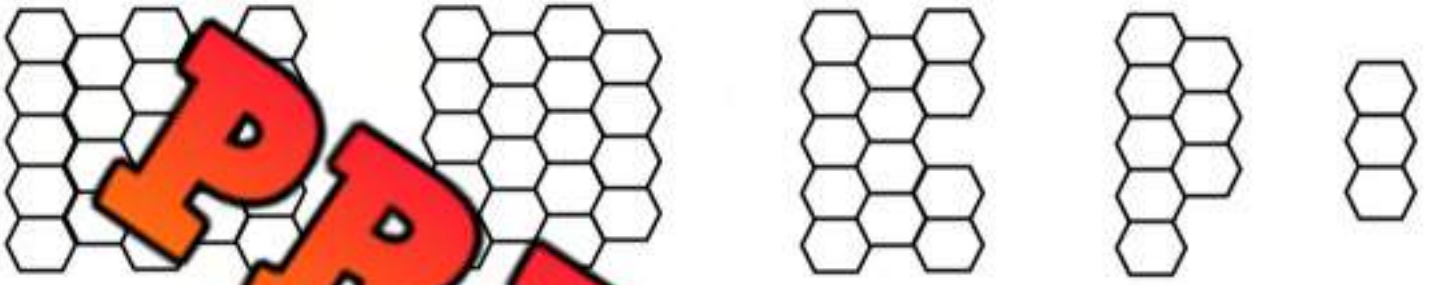
Name: _____ 60

Curriculum Connection
C1.2

Shrinking Pattern Challenge

Questions Answer the questions below using a table of values and a graph

Jill makes a pattern using hexagons. Translate the pattern using the graph and table of values.



Term Number	[illegible]

1) What is the pattern shrinking by each time?

2) Draw your own shrinking pattern below

Curriculum Connection
C1.2

Exit Cards

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

Name: ______________________________

Answer the questions below by using the table of values.

When you complete a math worksheet, you earn 8 points. Fill in the table below to learn more about your point collection.

# of Worksheets	Points Earned
2	
4	
6	
8	
10	

Name: ______________________________

Answer the questions below by using the table of values.

When you complete a math worksheet, you earn 8 points. Fill in the table below to learn more about your point collection.

# of Worksheets	Points Earned
2	
4	
6	
8	
10	

Name: ______________________________

Answer the questions below by using the table of values.

When you complete a math worksheet, you earn 8 points. Fill in the table below to learn more about your point collection.

# of Worksheets	Points Earned
2	
4	
6	
8	
10	

Name: ______________________________

Answer the questions below by using the table of values.

When you complete a math worksheet, you earn 8 points. Fill in the table below to learn more about your point collection.

# of Worksheets	Points Earned
2	
4	
6	
8	
10	

Name: _____ 62

Curriculum Connection
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 2 Figure 3

Figure	Term Value
1	
2	
3	
4	

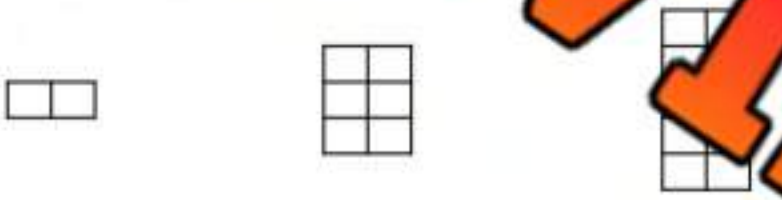
3) 
Figure 1 Figure 2 Figure 3

Figure	Term Value
1	
2	
3	
4	

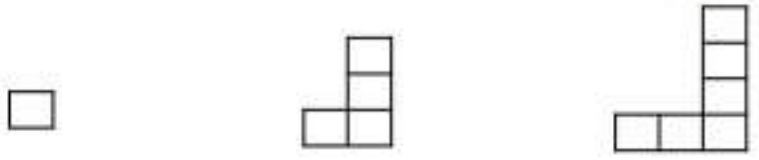
4) 
Figure 1 Figure 2 Figure 3

Figure	Term Value
1	
2	
3	
4	

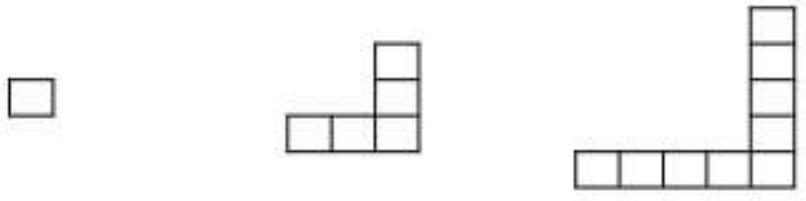
5) 
Figure 1 Figure 2 Figure 3

Figure	Term Value
1	
2	
3	
4	

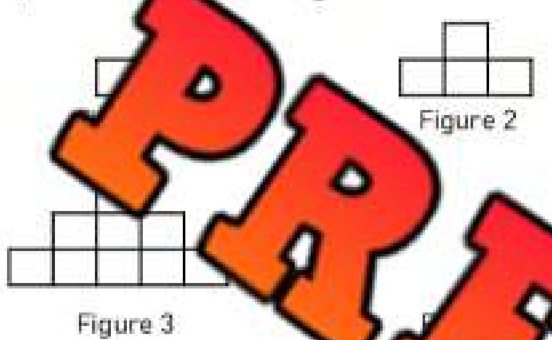
Curriculum Connection
C1.2, C1.3

Exit Cards

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

Name: ____________________

a) Draw the next figure.



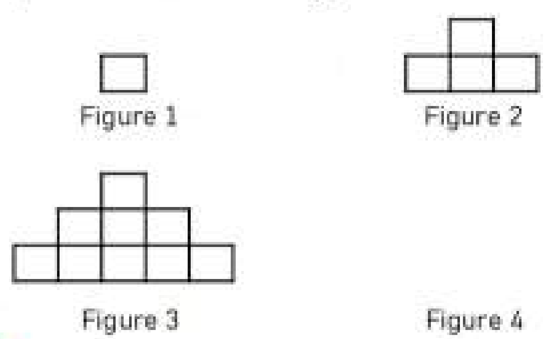
b) Write the number of sides that represents the figure sequence.

Fig 1 Fig 2 Fig 3 Fig 4

_____, _____, _____, _____

Name: ____________________

a) Draw the next figure.



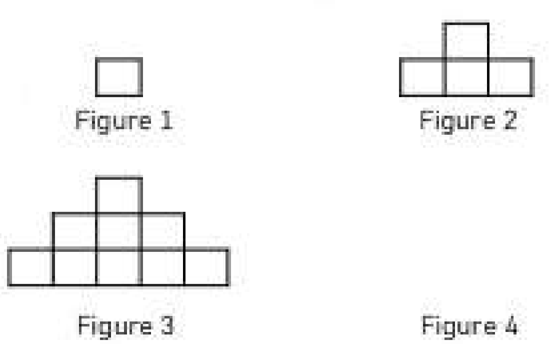
b) Write the number of sides that represents the figure sequence.

Fig 1 Fig 2 Fig 3 Fig 4

_____, _____, _____, _____

Name: ____________________

a) Draw the next figure.



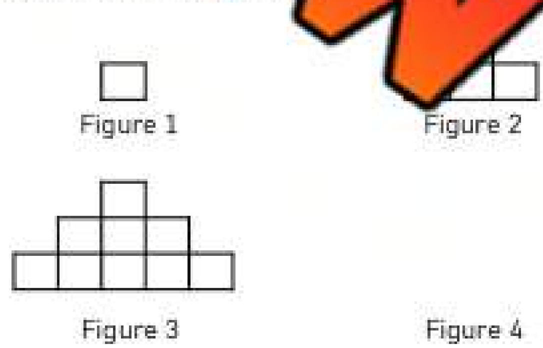
b) Write the number of sides that represents the figure sequence.

Fig 1 Fig 2 Fig 3 Fig 4

_____, _____, _____, _____

Name: ____________________

a) Draw the next figure.



b) Write the number of sides that represents the figure sequence.

Fig 1 Fig 2 Fig 3 Fig 4

_____, _____, _____, _____

Name: _____ 67

Curriculum Connection
C1.2, C1.3

Word Problem – Square Tables

Word Problem Solve the question below.

A school cafeteria uses square tables and places them side by side in a straight row for lunch. Each table can seat 4 people when standing alone. But when tables are joined side by side, they share one side, so 2 fewer seats are available for each table add[illegible] the row.

1) Fill in the table of values below.

Term Number – [illegible]	Term Value – Seats
1	
2	
3	
4	
5	
6	

2) How many people could sit with the following number of tables?

a) 20 tables

b) 30 tables

3) How many tables are needed for the following number of people?

a) 100 people

b) 152 people

Name: _____ 68

Curriculum Connection
C1.2, C1.3

Word Problem – Hexagonal Tables

Word Problem Solve the question below.

A science museum has tables in the shape of a hexagon and sets them up for special events as shown below. There is enough space in the exhibit hall to set up rows of up to six adjoining tables. If more seating is needed, then additional rows must be added.

1) Fill in the table of values below.

Term Number – T	Term Value – Seats
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

2) How many tables are needed for the following number of people?

a) 38 people

b) 50 people

Name: _____ 69

Curriculum Connection
C1.2, C1.3

Word Problem – Science Fair

Word Problem | Solve the question below.

A history fair uses triangle-shaped tables to display student projects. Each table has 3 display panels. When triangle tables are placed in a row, they share one side with the table next to them. The room allows up to 5 tables per row. If more space is needed, a new row is started.

1) Draw the tables of one row below.

1 Table	2 Tables	3 Tables	4 Tables	5 Tables

2) Answer the questions below.

a) How many display panels are available with 5 tables? _____

b) How many display panels are available with 8 tables? _____

c) How many display panels are available with 10 tables? _____

d) How many tables would you need to display 30 panels? _____

Workspace

Name: _____ 70

Curriculum Connection
C1.3

Table of Values – Finding Term N

When finding a random term in a pattern, we can use a variable. Often *n* is used to take the place of the term number. When we use *n*, we can change the value to find the term value for any term number.

We can find the value for *n* by looking at the pattern between the term number and term value. To do this, we look across the table from the term number to the term value.

Practice Find the pattern rule when you look <u>across</u> the table of values

Term Number	Term Value
1	3
2	4
3	5
4	6
5	7
8	

<u>n + 2</u>

Term Number	Term Value
1	2
2	4
3	6
4	8
5	10
9	

<u>n x 2</u>

Term Number	Term Value
1	5
2	10
3	15
4	20
5	25

_____

Term Number	Term Value
1	5
2	6
3	7
4	8
5	9
11	

_____

Term Number	Term Value
1	3
2	6
3	9
4	12
5	15
11	

_____

Term Number	Term Value
10	8
15	13
20	18
25	23
30	28
50	

_____

Name: _____ 71

Curriculum Connection
C1.3

Table of Values – Finding Term N

Practice Write an expression that represents the pattern

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

_____

Term Number	Term Value
1	14
2	15
3	16
4	17
5	18

_____

Term Number	Term Value
100	10
110	11
120	12
130	13
140	14
180	

_____

Term Number	Term Value
2	0
4	2
6	4
8	6
10	8
50	

_____

Term Number	Term Value
1	
2	
3	21
4	28
5	35
11	

_____

Term Number	Term Value
	10
	12
	14
90	18
200	

_____

Word Problem Write a table of values and find the n^{th} term

Joe goes out looking for shells on a beach. He records how many shells he finds each day. He found 10 shells the first day, 20 shells the second day, 30 the third day, and 40 the fourth day. How many will he find on the 30^{th} day if the pattern continues.

Name: _____ 72

Curriculum Connection
C1.3

Finding Term N – Word Problems

Word Problem | Use a table of values and find the n^{th} term

1) Hugh has been saving money since he was 1 years old. He is now 15. He saved $20 when he was 1, $40 when he was 2, $60 when he was 3 and $80 when he was 4.

a) If the pattern continues...

i) How much will he save when he is 10?

ii) How much will he save when he is 20?

iii) How much will he save when he is 50?

2) Pam is ramping up her exercise each week. In week 1, she exercised 40 minutes. In week 2, she exercised 80 minutes. In week 3, she exercised 120 minutes. In week 4, she exercised 160 minutes.

a) If the pattern continues...

i) How much will she exercise in week 10?

ii) How much will she exercise in week 30?

iii) How much will she exercise in one year? (week 52)

Exit Cards

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

Name: _____

Emma is building a Lego tower. She started when she was 1 year old. She is now 15. She added 10 pieces to her tower when she was 1, 20 pieces when she was 2, 30 pieces when she was 3, and 40 pieces when she was 4. If the pattern continues...

a) How many pieces will she add to her tower when she is 5?

Answer: _____

b) How many pieces will she add to her tower when she is 10?

Answer: _____

c) How many pieces will she add to her tower when she is 25?

Answer: _____

Name: _____

Emma is building a Lego tower. She started when she was 1 year old. She is now 15. She added 10 pieces to her tower when she was 1, 20 pieces when she was 2, 30 pieces when she was 3, and 40 pieces when she was 4. If the pattern continues...

a) How many pieces will she add to her tower when she is 5?

Answer: _____

b) How many pieces will she add to her tower when she is 10?

Answer: _____

c) How many pieces will she add to her tower when she is 25?

Answer: _____

Name: _____

Emma is building a Lego tower. She started when she was 1 year old. She is now 15. She added 10 pieces to her tower when she was 1, 20 pieces when she was 2, 30 pieces when she was 3, and 40 pieces when she was 4. If the pattern continues...

a) How many pieces will she add to her tower when she is 5?

Answer: _____

b) How many pieces will she add to her tower when she is 10?

Answer: _____

c) How many pieces will she add to her tower when she is 25?

Answer: _____

Name: _____

Emma is building a Lego tower. She started when she was 1 year old. She is now 15. She added 10 pieces to her tower when she was 1, 20 pieces when she was 2, 30 pieces when she was 3, and 40 pieces when she was 4. If the pattern continues...

a) How many pieces will she add to her tower when she is 5?

Answer: _____

b) How many pieces will she add to her tower when she is 10?

Answer: _____

c) How many pieces will she add to her tower when she is 25?

Answer: _____

Name: _____ 74

Curriculum Connection
C1.2, C1.3

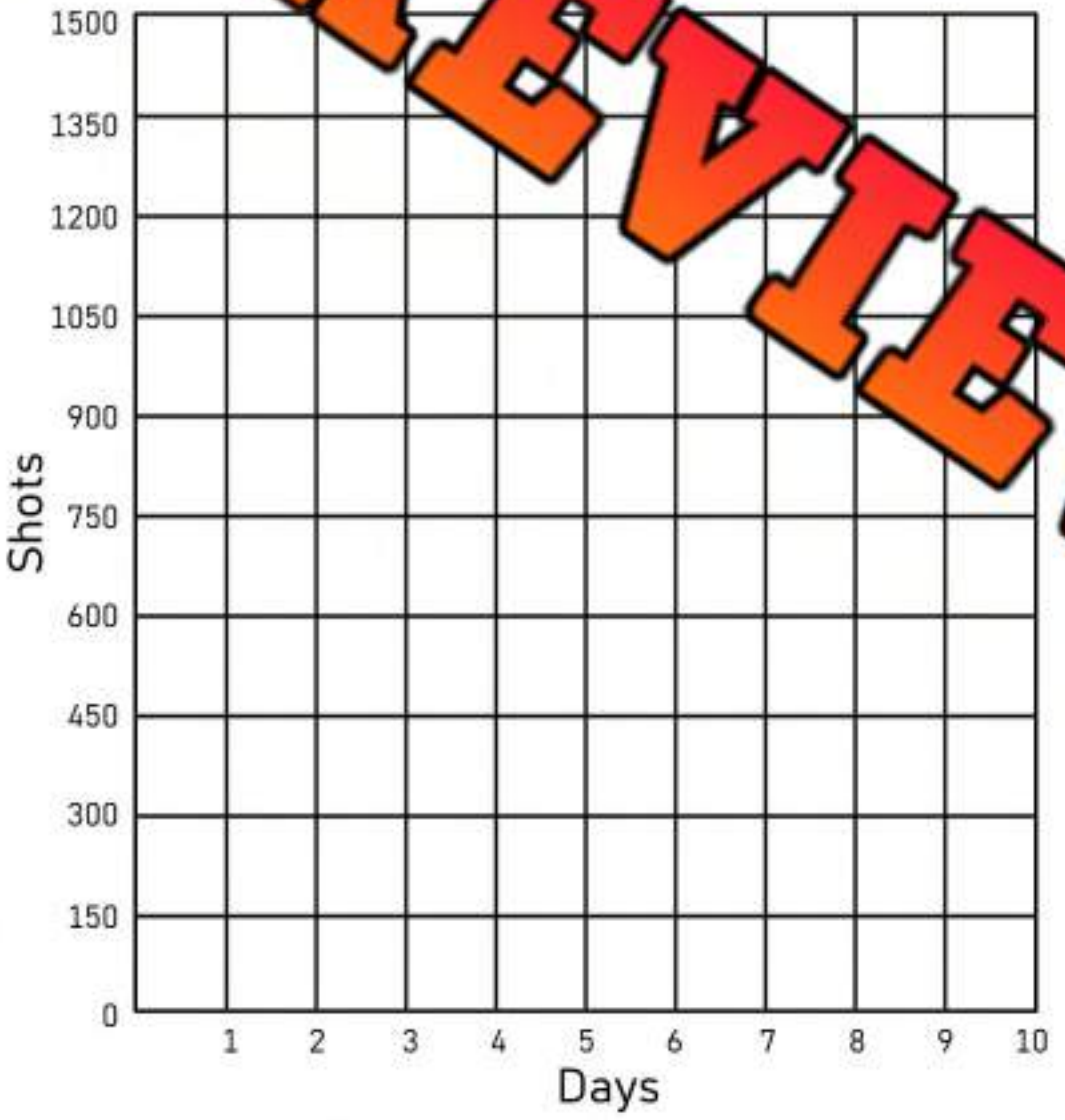
Basketball Skills Challenge

Instructions Complete the table of values and graph the results

Connor is practicing his shooting skills in basketball. He decides to take 150 shots each day for 10 days.

Term Number (Day	1	2	3	4	5	6	7	8	9	10
Term										

Pattern Ru_____



Questions

1. Which day did Connor finish 1000 shots?

_____

2. many shots nnor take in

_____

3. If his friend took 200 shots for 7 days, who would have taken more? Explain.

_____

_____

_____

Name: _____ 77

Curriculum Connection
C1.2, C1.3

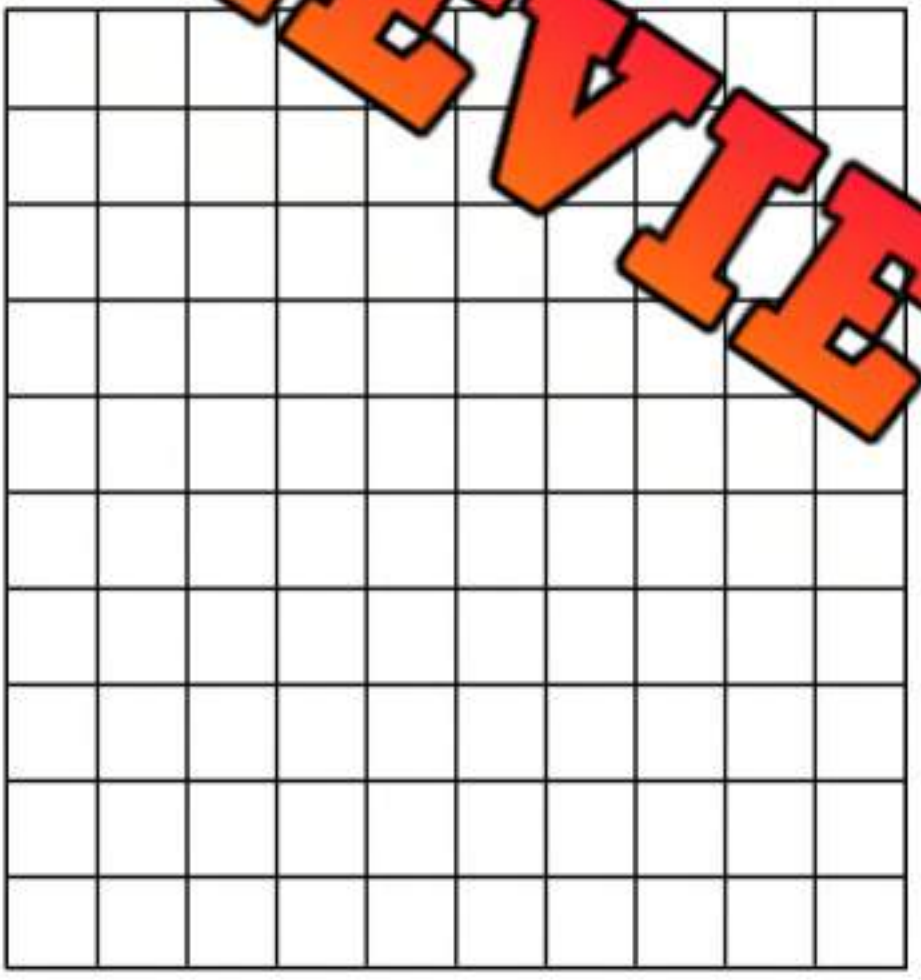
Saving Money

Instructions Complete the table of values and graph the results

Jesse is saving her pay cheques from work each week for 10 weeks. She makes $300 each week. She is hoping she can buy a new bike for $2500. Fill in the table below to find out.

Term Nu (Wee	1	2	3	4	5	6	7	8	9	10
Ter										

Pattern Ru _____



Questions

1. Can Jesse buy her new bike after week 10?

_____

2. much did ve in 10

_____

3. kept saving, how many weeks would she need to save $4200?

_____

4. How much money would she have after 13 weeks?

_____

Name: _____ 78

Curriculum Connection
C1.3

The Egg Challenge

Challenge Answer the question below. Show your thinking!

If a hen laid 3 eggs on Monday, 7 eggs on Tuesday, 11 eggs on Wednesday and the pattern continued, how many eggs would it lay on the Sunday?

If the pattern continued, how many days wo ake f to lay 75 eggs?

Name: _____ 79

Curriculum Connection
C1.3

Patterning - Word Problems

Questions | Answer the questions below

1) Heather is filling her pool with water. She doesn't want to use too much in one day, so she only fills the pool with 45L a day. The pool can hold 405L. How many days will it take her to fill the pool?

2) Graham sells pizza[illegible] 5 pizzas a day. How many days will it take Graham to earn $7[illegible]

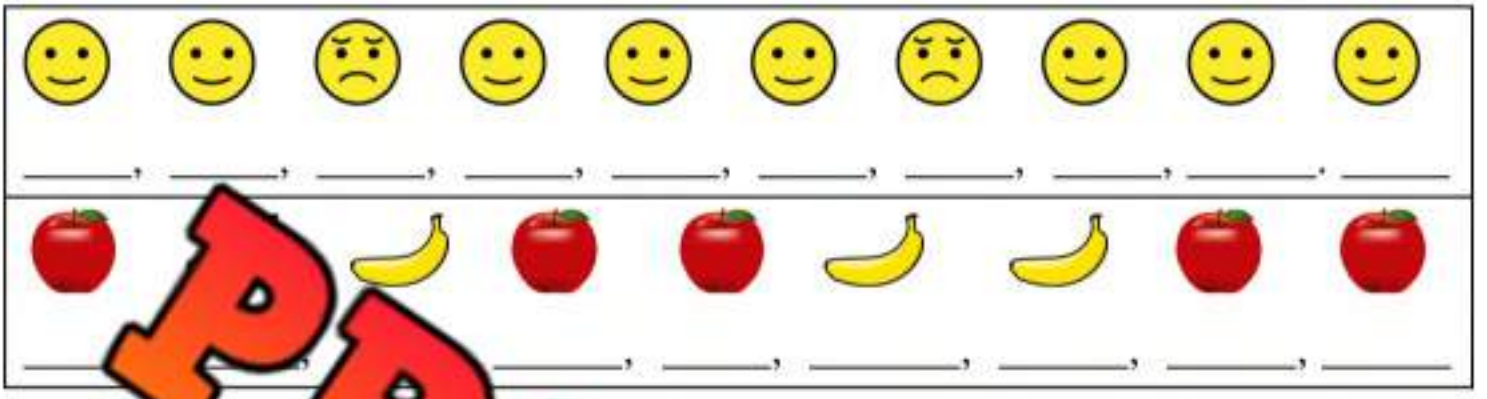
3) Tom works a summer job cleaning up playgrounds. He earns $40[illegible] every two weeks. How much will he earn after 10 weeks?

Bonus – How many weeks will he need to work to make $2600?

Name: _____ 80

Algebra Quiz - Patterning

Part 1 Repeating A, B patterns – Label the patterns below A and B

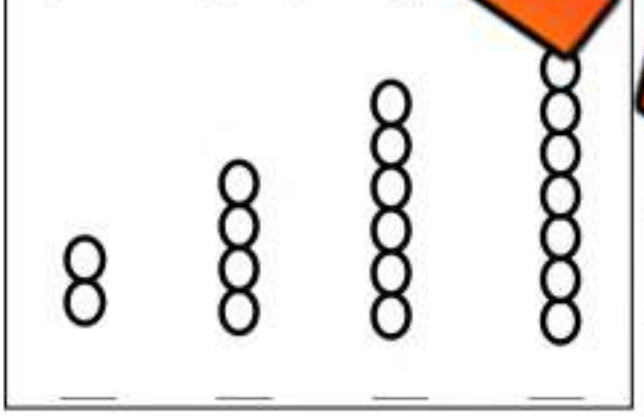


_____, _____, _____, _____, _____, _____, _____, _____, _____, _____

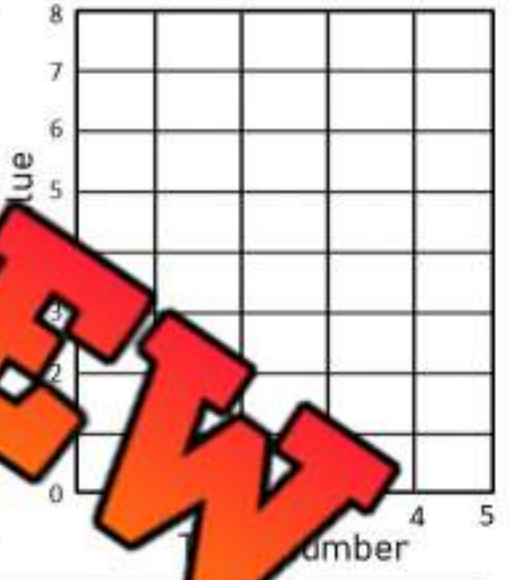
_____, _____, _____, _____, _____, _____, _____, _____, _____, _____

Part 2 [illegible] pattern into a table of values and a graph

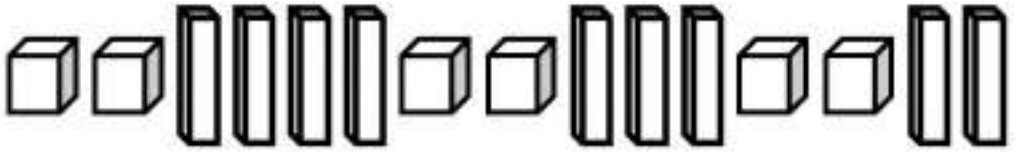
Fill in the table of values [illegible]
by translating the growing pa[illegible]



Term	Value



Part 3 Label the shapes below A and B and continue the increasing/decreasing patterns

1) 

2) 

Part 4 T-Tables

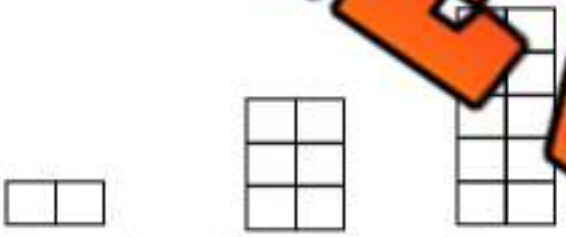
Term Number	Term Value
1	74
2	81
3	88

+ + + + +

Term Number	Term Value
1	137
2	131
3	
4	119
5	
6	

- - - - -

Figu



1) Figure 1 Figure 2 Figure 3 Fig 4

Figure	Term Value
1	
2	
3	

Part 5 Solve the word problem below. Show y ork

1) a) If you did 15 push-ups a day for 10 days, how many days w ld you to do 135 pushups?

b) On which day would you complete 105 pushups?

2) If you read 3 books on Monday, 6 books on Tuesday, 9 books on Wednesday, how many books would you read on Sunday if the pattern continued?

Part 6	Answer the questions below

At a book festival, students display their projects on square tables. Each square table has 4 display panels (one per side). When tables are placed in a straight line, they share one side with the table next to them. Each row can hold a maximum of 5 tables. If more display space is needed, a new row is added.

1) Draw a visual of one row below.

1 T		3 Tables	4 Tables	5 Tables

2) Answ the q low

a) How many anels able with 5 tables?	
b) How many displa ith 8 tables?	
c) How many display pan ail 0 tables?	
d) How many tables would you eed els?	

kspace

Grade 5
C2. Equations and Inequalities

	Curriculum Expectations	Pages That Cover the Expectations
C2.1	translate among words, algebraic expressions, and visual representations that describe equivalent relationships	84 – 91, 98 – 109, 117 – 125, 135 – 140, 144 - 150
C2.2	evaluate algebraic expressions that involve whole numbers	92 – 97, 101 – 102, 110 – 116, 119 – 123, 126 – 134, 137, 141 – 143, 146 - 157
C2.3	solve equations that involve whole numbers up to 100 in various contexts, and verify solutions	92 – 97, 101 – 102, 110 – 116, 119 – 123, 126 – 134, 137, 141 – 143, 146 - 150
C2.4	solve inequalities that involve one operation and whole numbers up to 50, and verify and graph the solutions	158 - 166

Name: _____ 84

Curriculum Connection
C2.1

Equation or Expression?

An **equation** is a mathematical sentence which states that one or more quantities are equal. Equations have an equal sign with values on both sides to show they are equal. An **expression** is a mathematical sentence that does not have an equal sign.

Equation = 3 + n = 21 or 32 ÷ 4 = 8

Expression = 3y + 2 or 49 ÷ n

Question: Is the number sentence an expression or equation?

1) 1 [illegible] 20 Expressi[illegible] Eq[illegible]	2) 25 + y Expression Equation
3) 3y + 8 [illegible] Expression Equation	4) 2n + 5 E[illegible]sion Equation
5) 8 – 4 + n = 10 Expression Equation	[illegible] + n Expr[illegible]uation
7) 12 ÷ 4 = 3 Expression Equation	8) 56 [illegible] Expression Equation
9) 100 ÷ n + 3 Expression Equation	10) $\frac{25}{n}$ + 10 = 15 Expression Equation
11) $\frac{40}{n}$ – 8 Expression Equation	12) 65 + 3 – n ÷ 10 Expression Equation

Name: _____ 85

Curriculum Connection
C2.1

Equation or Expression?

Questions Is the number sentence an expression or equation?

1) Paul has 5 cookies but needs enough for 10 people. $5 + c = 10$	Equation	Expression
2) The pa[illegible]s the following rule: $3n - 1$	Equation	Expression
3) Maria wants [illegible] th[illegible]week. She has already run 22km. 22 + [illegible]	Equation	Expression
4) The cost to enter an a[illegible]t pa[illegible]er ticket. $20t$	Equation	Expression
5) Jeff works at a garden centre and earns $[illegible] hour. He can figure out his pay by using the follow[illegible] $15h$	[illegible]n	Expression
6) Bailey made $200 last week working with her mom. She worked 10 hours. $10w = 200$	Eq[illegible]	[illegible]sion
7) Jane had 150 candies to give away on Halloween. She has 30 left. $150 - c = 30$	Equation	Expression
8) Ashley had 200 candies to give away on Halloween. She will give 2 candies to each kid. How many kids can she give candy to? $200 \div 2 = k$	Equation	Expression
9) Candy bags come in 30 packs. The total number of candies is represented below: $30b$	Equation	Expression

Exit Cards

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

Name: ______________________

Is the number sentence an expression or equation? Circle the answer

1) The perimeter of a rectangle is calculated by the formula: 2(l + w)

Expression   Equation

2) Emma has read 15 pages of a book and wants to read a total of 50 pages this week.

15 + p = 50

Expression   Equation

Name: ______________________

Is the number sentence an expression or equation? Circle the answer

1) The perimeter of a rectangle is calculated by the formula: 2(l + w)

Expression   Equation

2) Emma has read 15 pages of a book and wants to read a total of 50 pages this week.

15 + p = 50

Expression   Equation

Name: ______________________

Is the number sentence an expression or equation? Circle the answer

1) The perimeter of a rectangle is calculated by the formula: 2(l + w)

Expression   Equation

2) Emma has read 15 pages of a book and wants to read a total of 50 pages this week.

15 + p = 50

Expression   Equation

Name: ______________________

Is the number sentence an expression or equation? Circle the answer

1) The perimeter of a rectangle is calculated by the formula: 2(l + w)

Expression   Equation

2) Emma has read 15 pages of a book and wants to read a total of 50 pages this week.

15 + p = 50

Expression   Equation

Name: _____ 87

Curriculum Connection
C2.1

Statements and Algebraic Expressions

Questions Fill in the blanks below

Statements	Algebraic Expressions
Multiply **n** by 3 and add 5.	3n + 5
Add	
Subtract 4 from	
Multiply **n** by 5	
Multiply n by 2, and add 7.	
Divide 12 by n, and add 2.	
	$\frac{n}{2}$
	$\frac{20-2}{2}$
Subtract 2 from **n**, multiply by 5.	
	$\frac{30}{n} - 1$

Name: _____ 88

Curriculum Connection
C2.1

Statements and Algebraic Expressions

Questions Fill in the blanks below

Input	Change Rule	Output
1	**Add 5**	
2		
5		
n		

Input	Change Rule	Output
10	**Subtract**	
20		
30		
40		
50		
n		

Input	Change Rule	Output
2	**Multiply by 3**	
4		
6		
8		
10		
n		

Name: _____ 89

Curriculum Connection
C2.1

Match the Shape to Its Formula

Instructions Draw a line from the shape/concept to the expressions

Shape/Concept	Possible Expressions
Perimeter of a **rectangle**	(b × h) ÷ 2
Perimeter of a **regular pentagon**	4s
Perimeter of a **rhombus**	2l + 2w
Perimeter of a **triangle**	s + s + s + s + s
Perimeter of a **square**	s + s + s + s
Area of a **triangle**	2 × (l + w)
Perimeter of a **parallelogram**	l × w
Area of a **square**	s × s
Area of a **rectangle**	a +

Questions Answer the questions below

1) Why can the perimeter of a square be written as 4s instead of s + s + s + s?

2) Are there two shapes/concepts that have similar expressions? Explain why that is the case.

Name: _____ 90

Curriculum Connection
C2.1

Addition – Are They Equal?

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

8 + 4 = 12	23 + 15 ≠ 36	47 + 13 = 50

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

1) [illegible] + 10	2) 40 + 10 = 30	3) 48 + 7 = 45
4) 35 + 7 = 41	5) 2[illegible]40	6) 30 + 40 = 60
7) 61 + 9 = 70	8) 54 + 7[illegible]	9) 67 + 7 = 74
10) 42 + 20 = 62	11) 54 + 14 = 67	12) [illegible]
13) 61 + 14 = 65	14) 74 + 14 = 84	15) 66 + 12 = 76
16) 12 + 63 = 75	17) 80 + 8 = 88	18) 55 + 16 = 71
19) 11 + 81 = 92	20) 22 + 66 = 98	21) 56 + 43 = 99

Name: _____ 91

Curriculum Connection
C2.1

Addition – Which Equation Matches?

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

Example

12 + 11	(14 + 9)	19 + 5

Instruc Circle the equation that matches the shaded in equation

1)	27 + 9	31 + 4	30 + 6
2)	36 + 12	31	25 + 14
3)	42 + 18	51 + 9	47 + 12
4)	55 + 13	51 + 16	
5)	72 + 15	75 + 12	52 + 33
6)	102 + 12	99 + 15	104 + 12
7)	124 + 24	131 + 16	129 + 19

Name: _____ 92

Curriculum Connection
C2.2, C2.3

Pre-Algebra – Balancing Equations

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

Examples:

$22 + 15 = \boxed{37}$ (37 above the box)

$46 + \boxed{32} = 78$ (78 above the box)

Instructi — Fill in the missing number to balance the equation

1) 15 =	2) 33 + 8 = ☐	3) 54 + 3 = ☐
4) 18 + ☐ = 2	5) 2 + ☐ = 32	6) 32 + ☐ = 39
7) ☐ + 8 = 26	8) ☐ + 15	☐ + 35 = 45
10) 45 + 14 = ☐	11) 22 + ☐ = 62	65
13) 44 + ☐ = 88	14) 62 + 15 = ☐	15) 72 + ☐ = 85
16) 55 + ☐ = 89	17) 62 + 23 = ☐	18) 17 + ☐ = 87
19) 77 + ☐ = 98	20) 51 + 41 = ☐	21) 57 + ☐ = 99

Name: _____ 98

Curriculum Connection
C2.1

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) Je[illegible]king cookies. Rebecca made 20 cookies. They made 50 total co[illegible]es. Wh[illegible]n will tell us how many cookies Jen made?

[illegible] + 20 =	50 + c = 20
[illegible]	c – 20 = 50

3) Scott and Luke love hockey cards. [illegible]s and Luke has 50 cards. Which equation will tell us how many cards [illegible] have?

c + 25 = 50	25 [illegible]
25 + c = 50	[illegible]

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

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

Exit Cards

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

Name: _____

Jacob, E[illegible] and Lucas have $300 together. [illegible] has $100 and Emily has $1[illegible] [illegible]ation will tell us how [illegible]ey [illegible] has?

a) 100 + 12[illegible]

b) l + 100 + 120 [illegible]

c) 300 = 100 + 120 + l

d) All of the above

Name: _____

Jacob, Emily, and Lucas have $300 together. Jacob has $100 and Emily has $120. Which equation will tell us how much money Lucas has?

a) 100 + 120 + l = 300

b) l + 100 + 120 = 300

c) 300 = 100 + 120 + l

d) [illegible]he above

Name: _____

Jacob, Emily, and Lucas have $300 together. Jacob has $100 and Emily has $120. Which equation will tell us how much money Lucas has?

a) 100 + 120 + l = 300

b) l + 100 + 120 = 300

c) 300 = 100 + 120 + l

d) All of the above

Name: _____

Jacob, Emily, and[illegible] together. Jacob ha[illegible] Emily has $120. Which equat[illegible]ill tell us how much money Lucas has?

a) 100 + 120 + l = 300

b) l + 100 + 120 = 300

c) 300 = 100 + 120 + l

d) All of the above

Name: _____ 101

Curriculum Connection
C2.1, C2.2, C2.3

Word Problems – Solving Addition Equations

Questions | Write the algebraic equations and answer the question

1) Tim drove 138 km to get to work. Then he drove to the store. When he got to the store, he had driven 195 km in total. How many km did he drive to the store (s)?

2) Steve [illegible] for beating level 1 in a video game. He got 68 more points for beati[illegible] total points (t) did he have after level 2?

Bonus – He ha[illegible] points [illegible] eating level 3. How many points did he get in level 3 (l)?

3) The Lakers scored 122 total p[illegible]s in [illegible] the Toronto Raptors. Kobe Bryant had 81 points for the Lakers. How many [illegible] (p) did [illegible] st of the team have?

4) Jessica's boat can hold a whopping 200 litres of gas. She went ou[illegible] tank. When she docked the boat after she was done, the tank had 4[illegible] many litres (l) did she use?

5) Becca had $187 in her bank account. She deposited some more money after she babysat for a summer. Now she has $410. How much money (m) did she make babysitting?

Name: _____ 102

Curriculum Connection
C2.1, C2.2, C2.3

Solving Addition Equations – Shopping Trip

Questions Solve the problems below. The first one is done for you

1) Jan spent *x* amount of dollars on new clothes at the mall. She bought jeans (j) for $79, a shirt (s) for $35, and a hat (h) for $49. Find the value of x.

Equation : x = j + s + h

x = 79 + 35

x = $163 Therefore, Jan spent $163.

2) Hi dollars at pet store. She bought dog food (f) for $59 and bones (r $29 ught a new dog toy (t) for $22. How much did she spend? Find the value

Equation : _____

_____

_____ e, _____

3) Josiah spent $510 total (t) at a sporti sto bought new skates (s) for $310, new gloves (g) for $120, and a ne for *n* dollars. How much is *n* worth?

Equation : _____

_____

_____ Therefore, _____

4) Barry bought 3 new t-shirts (s) that all cost the same amount of (t) price of $186. How much is *s* worth?

Equation : _____ = _____ + _____ + _____ or _____ = _____ ÷ _____

_____

_____ Therefore, _____

5) Henry bought a new computer setup for a total (t) of $799. He bought a computer for c number of dollars. He also bought a keyboard (k) for $44 and a mouse (m) for $35. How much is c worth?

Equation : _____

_____

_____ Therefore, _____

Name: _____ 103

Curriculum Connection
C2.1

Subtraction – Are They Equal?

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

12 - 4 = 8	42 - 11 ≠ 30	34 - 17 = 17

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

1) [illegible] - 3	2) 17 - 4 = 14	3) 20 - 7 = 13
4) 28 - 11 = 17	5) [illegible] 28	6) 42 - 10 = 33
7) 48 - 14 = 34	8) 45 - 16 [illegible]	9) 57 - 14 = 44
10) 62 - 12 = 50	11) 68 - 15 = 52	12) [illegible]
13) 78 - 22 = 55	14) 74 - 13 = 61	15) 84 - 13 = 74
16) 89 - 0 = 0	17) 91 - 11 = 80	18) 86 - 15 = 72
19) 95 - 30 = 65	20) 97 - 16 = 82	21) 77 - 26 = 51

Name: _____ 104

Curriculum Connection
C2.1

Subtraction – Which Equation Matches?

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

Example

19 - 8	(15 - 4)	21 - 9

Instructi Circle the equation that matches the shaded in equation

1)	42	38 - 9	45 – 15
2)	53 - 11	6	51 – 6
3)	73 – 8	70	78 – 12
4)	87 - 12	84 - 10	
5)	103 - 12	99 – 8	105 – 13
6)	121 - 13	115 - 6	120 – 12
7)	136 - 15	139 - 18	141 - 22

Name: _____ 105

Curriculum Connection
C2.1

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[illegible]ring critical thinking and problem-solving skills in a collaborative group se[illegible]

Mat[illegible]	W[illegible] will need for the activity.

- Pre-prepar[illegible]re-c[illegible]g cards.
- Small bags or envel[illegible]old t[illegible]ets for each group

Instructions	How you will complete the [illegible]

1. Before the class, the teacher will cut out the p[illegible]ed m[illegible]ng game cards.
2. Divide the students into small groups and give each group [illegible]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: _____ 106

Curriculum Connection
C2.1

Cards | Matching Game Cards

10 + 15	20 + 5
50 - 0	30 - 0
100 + 50	1[illegible] + 25
90 - 30	60 - [illegible]
75 + 25	100 + 0

Name: _____ 107

Curriculum Connection
C2.1

Cards | Matching Game Cards

200 - 50	150 - 0
12[illegible]30	150 + 50 - 0
140 - 40	1[illegible] - 80
60 + 20	70 + 1[illegible]
180 - 80	100 + 90 - 10

Name: _____ 108

Curriculum Connection
C2.1

Cards | Matching Game Cards

110 + 50	120 + 40
21[illegible]	150 + 20 - 10
130 + 40	1[illegible] + 30
170 - 70	120 + 20 [illegible] 20
90 + 90	150 + 30

Name: _____ 109

Curriculum Connection
C2.1

Cards | Matching Game Cards

200 + 50 - 30	210 + 10 - 0
100 + 10	130 + 0
60 + 50 - 10	+ 30
150 + 20 - 10	140 +
220 - 70 + 30	180 + 0

Name: _____ 110

Curriculum Connection
C2.2, C2.3

Pre-Algebra – Balancing Subtraction Equations

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

Examples:

$24 - 8 = \boxed{16}$ (16 above 8)

$45 - 16 = \boxed{29}$ (29 above 16)

Instructi Fill in the missing number to balance the equation

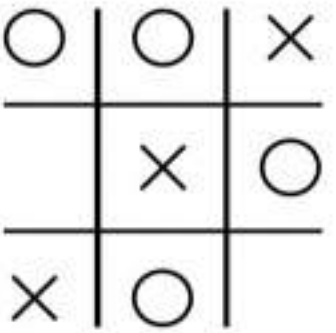
1) 23 - ☐ =	2) 28 - 4 = ☐	3) 32 - 7 = ☐
4) 15 - ☐ = 5	5) ☐ - = 9	6) 22 - ☐ = 11
7) ☐ - 8 = 13	8) ☐ - 7	☐ - 12 = 12
10) 43 - 11 = ☐	11) 64 - ☐ = 44	☐ 44
13) 71 - ☐ = 58	14) 77 - 12 = ☐	15) 65 - ☐ = 49
16) 85 - ☐ = 67	17) 74 - 15 = ☐	18) 86 - ☐ = 72
19) 90 - ☐ = 60	20) 86 - 16 = ☐	21) 98 - ☐ = 85

Name: _____ 114

Curriculum Connection
C2.2, C2.3

Math Tic-Tac-Toe: Solving Variables

Objective What are we learning about?



To help students practice solving subtraction equations involving variables in a fun and interactive way through a Tic-Tac-Toe game.

Materials What you will need for the activity.

- Tic-Tac-Toe game boards

Instructions How you will play the game

1. Find a partner to play the game with.
2. The goal is to solve the algebraic equations and place your marker (X or O).
3. One player will be "X" and the other will be "O".
4. Take turns choosing a square and solving the equation in that square to find the value of the variable.
5. Write down the solution below the equation and place your marker (X or O) in the square.
6. If a player chooses a square and solves the equation incorrectly, they do not get to place their marker in that square. The other player gets a chance to solve it correctly and place their marker.
7. The first player to get three markers in a row (horizontally, vertically, or diagonally) wins the game. Continue playing with different tic-tac-toe grids on the sheet.

Name: _____ 115

Curriculum Connection
C2.2, C2.3

Tic-Tac-Toe Use the following tic-tac-toe grids for the game.

x – 3 = 5	8 – y = 2	z – 4 = 6
y – 2 = 3	10 – x = 4	w – 5 = 7
6 – z =	– 1 = 5	n – 6 = 2

h – 5 = 2	i – 3 = 6	j – 7 = 3
k – 2 = 9	l – 1 = 8	m – 4 = 7
39 – h = 9	38 – i = 7	37 – j = 8

b – 4 = 5	c	
e – 1 = 8	f – 2 = 7	g – 5 =
37 – b = 9	36 – c = 8	35 – d = 7

v – 5 = 3	w – 2 = 7	x – 4 = 5
y –	z – 3 = 6	a – 6 = 2
35	4 – w	33 – x = 7

p – 6 = 2	q – 4 = 5	r – 5 = 3
s – 1 = 8	t – 2 = 9	u – 3 = 7
33 – p = 9	32 – q = 8	31 – r = 7

j – 5 = 4	k – 3 = 6	l – 6 = 1
m – 2 = 9	n – 1 = 8	o – 4 = 7
31 – j = 8	30 – k = 9	29 – l = 7

Name: _____ 117

Curriculum Connection
C2.1

Word Problems – Writing Subtraction Equations

Questions | Answer the questions below

1) Harry bought 15 donuts. Him and a friend ate 5 of them. Which equation will tell us how many donuts there are left?

d - 5 = 15	15 - 5 = d
5 + d = 15	5 - d = 15

2) Ke[illegible] were having a fire. They had 18 logs for the fire. After the fire[illegible]ey onl[illegible]. Which equation tells us how many logs they burned?

b - [illegible]	18 - 4 = b
[illegible] - 4	4 - b = 18

3) Tom collected 73 shells on the bea[illegible]ave [illegible] to his sister. Now he has 60 shells left. Which equation tells us h[illegible]ny she[illegible]ve to his sister.

73 - s = 60	[illegible]
s - 60 = 73	[illegible] = 60

4) Courtney saved 75 dollars. She bought a new sweater. She n[illegible]s. Which equation tells us how much the sweater cost?

75 - s = 45	75 - 45 = s
45 + s = 75	s - 45 = 75

5) The movie is 93 minutes long. They have watched 31 minutes. Which equation tells us how many minutes are left?

m - 31 = 93	93 - 31 = m
31 + m = 93	31 - m = 93

Name: _____ 119

Curriculum Connection
C2.1, C2.2, C2.3

Word Problems – Solving Subtraction Equations

Instructions Solve the word problems using equations and variables

1) Bridgette started the weekend with $214 in her bank account. She went shopping (s) at the mall and now had $76. How much did she spend at the mall?

2) S[illegible] found 1[illegible] eggs during her Easter egg hunt. She gave some to her friends and now [illegible] eggs left. How many did she give (g) away?

3) There are 128 minutes in a movie [illegible] is [illegible]ng. He watches 41 minutes and then pauses the movie for popc[illegible]ow ma[illegible] (m) are left?

4) Jeremy is climbing Mount Everest to Base Camp. It is 5,464[illegible] for a break with 1,100m left. How many metres has he climbed (c) al[illegible]ead[illegible]

5) Pam is driving to her cottage in northern Alberta. The total distance is 721km. She has driven 315km already. How much more distance (d) does she need to drive?

Name: _____ 121

Curriculum Connection
C2.1, C2.2, C2.3

Math Activity Title: Algebraic Bottle Flip Challenge

Objective
What are we learning about?

To practice and reinforce understanding of basic one-step subtraction algebra problems through the engaging and physically active bottle flip game.

Materials
What you will need for the activity.

- [illegible] bottles [illegible] pair/group) filled to approximately one-third with water (or [illegible] cups)
- Set of sub[illegible]gebra[illegible]on cards
- Answer shee[illegible]ch gr[illegible]

Instructions
How you[illegible]ple[illegible]ity

1. Start with a short lesson on one-[illegible]btract[illegible]ebra problems, using examples like x - 3 = 4.
2. Arrange the students into pairs or small [illegible] and [illegible] bottle and a set of question cards to each.
3. Each pair or group receives an answer sheet to [illegible]eir an[illegible]
4. Explain the rules: One student draws a question ca[illegible]ies [illegible] t[illegible] subtraction algebra problem.
5. Once they believe they have the correct answer, they write it [illegible] answer sheet.
6. The student then gets to attempt a bottle flip. After answering each [illegible]estion, the students gets only one flip. After they flip their bottle, they should keep track of successful flips and unsuccessful flips.
7. Alternate turns within each group or pair until they have completed all the question cards.
8. Groups or pairs tally their successful flips and compare with the rest of the class to determine the winning team (team with the most successful flips/correct answers). For incorrect answers, deduct a point from their successful bottle flips.
9. Go through the answer sheet with the class to ensure understanding and correct any misconceptions.
10. Discuss the strategies used to solve the subtraction problems and how this type of algebra is used in real-life situations.

Name: _____ 122

Curriculum Connection
C2.1, C2.2, C2.3

Questions | Cut out the questions below and use for the game

1) x - 12 = 68	2) b - 13 = 37	3) 150 - d - 8 = 92	4) 167 - 10 - 23 = w
5) y - 9 = 41	6) n - 5 = 35	7) 92 - q - 18 = 52	8) 236 - t - 117 = 43
9) m - 16 = 74	10) p - 17 = 33	11) r - 20 - 12 = 58	12) v - 158 - 14 = 118
13) Kelly had 45 stick... lost ... she ...0. How many did she lose?	14) Sam had 60 ...les and lost ... ...ow he ... ...low ... ...d h... ...se?	15) Sara set aside $400 for school supplies. She spent $90 on notebooks, $125 on textbooks, and some amount on art supplies. She has $125 left for pens and ...cils. How much did ... ...pend on art ...lies?	16) Sophia decides to use $550 for car repairs. She spent some amount on new tires, $150 on brake pads, and $100 on an oil change. She has $100 left for a car wash. How much did she spend on new tires?
17) Dylan had 70 candies and gave some away. Now he has 55. How many did he give away?	18) Eva had 90 crayons and broke some. Now she has 65. How many did she break?	...ael pl... allo...te $700 ...ome improve... He spent some...unt ... paint, $180 o... curtains, and $100 ... light fixtures. He has $220 left for a new rug. How much did he spend on paint?	...) The Johnsons plan to ...00 for a party. They ... ...0 on decorations, ...ome a... ...on food, and ...80 o... ...s. They have ...150 ... ...ors. How ... ...end o...
21) Lucy had a number of balloons. She gave 10 to her friend and now has 40 left. How many balloons did Lucy start with?	22) Mike had a number of books. He gave 12 to his friend and now has 30 left. How many books did Mike start with?	23) Liam and Olivia have $350 for a weekend getaway. They spent $100 on gas, some amount on lunch, and $85 on souvenirs. They have $95 left for dinner. How much did they spend on lunch?	24) Emma and Noah budget $300 for dinner out for 3 nights. They spent $75 on the first dinner, some amount on the second dinner, and $97 left for the third dinner. How much did they spend on the second dinner?

Name: _____ 123

Curriculum Connection
C2.1, C2.2, C2.3

Algebraic Bottle Flip Challenge

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: _____ 125

Curriculum Connection
C2.1

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

Instruct | Circle the equation that matches the shaded in equation

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

Name: _____ 126

Curriculum Connection
C2.2, C2.3

Pre-Algebra – Balancing Multiplication Equations

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

Examples:

18
6 x 3 = 18

16
4 x 4 = 16

Instructi Fill in the missing number to balance the equation

1) 8 x ☐	2) 4 x 3 = ☐
3) 5 x ☐ = 35	) 3 x ☐ = 12
5) ☐ x 5 = 10	6) ☐ 25
7) 7 x 10 = ☐	8) 4 x ☐ 20
9) 7 x ☐ = 21	10) 7 x 3 = ☐
11) 4 x ☐ = 16	12) 4 x 6 = ☐
13) 7 x ☐ = 63	14) 8 x 6 = ☐

Name: _____ 130

Curriculum Connection
C2.2, C2.3

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: 7n = 14 means 7 x n = 14

We can figure out the unknown number by balancing the equation.
In this eq[illegible]n, n = 2.

Instr[illegible]d out the value of the variable

1) 3n = 6 n =	2) n x 8 = 16 n =
3) 10 x 4 = p p =	[illegible]0 p
5) 3n = 18 n =	6) [illegible] n =
7) 5n = 25 n =	8) 6 x 4 = t t =
9) 3n = 24 n =	10) 10n = 100 n =
11) 9s = 27 s =	12) 5 x 8 = s s =

Name: _____ 138

Curriculum Connection
C2.1

Division – Are They Equal?

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

$8 \div 2 \neq 5$	$9 \div 3 = 3$	$15 \div 3 \neq 3$

Instructi

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

1) [illegible]	2) 20 ÷ 10 = 10
3) 9 ÷ 3 [illegible]	4) 16 ÷ 2 = 6
5) 25 ÷ 5 = 5	[illegible] = 7
7) 42 ÷ 7 = 7	8) [illegible]
9) 32 ÷ 8 = 3	10) 48 ÷ 8 = 6
11) 64 ÷ 8 = 6	12) 24 ÷ 12 = 2
13) 33 ÷ 3 = 3	14) 55 ÷ 11 = 5

Exit Cards

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

Name: _____

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

1) 45 ÷ 5 = 8
2) 72 ÷ 8 = 9
3) 40 ÷ 8 = 6
4) 100 ÷ 20 = 5

Name: _____

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

1) 45 ÷ 5 = 8
2) 72 ÷ 8 = 9
3) 40 ÷ 8 = 6
4) 100 ÷ 20 = 5

Name: _____

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

1) 45 ÷ 5 = 8
2) 72 ÷ 8 = 9
3) 40 ÷ 8 = 6
4) 100 ÷ 20 = 5

Name: _____ 140

Curriculum Connection
C2.1

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

Instruct | Circle the equation that matches the shaded in equation

1)	20 ÷	10 ÷ 2	12 ÷ 2
2)	18 ÷ 3	6	60 ÷ 10
3)	28 ÷ 4	42 ÷ 7	49 ÷ 7
4)	45 ÷ 5	18 ÷ 2	
5)	36 ÷ 6	18 ÷ 3	16 ÷ 4
6)	24 ÷ 3	45 ÷ 5	40 ÷ 5
7)	32 ÷ 8	27 ÷ 9	28 ÷ 7

Name: _____ 141

Curriculum Connection
C2.2, C2.3

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)

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

Questions: Fill in the missing number to balance the equation

1) 18 ÷ ☐ = 3	2) 12 ÷ 3 = ☐
3) 15 ÷ ☐ = 5	22 ÷ ☐ = 2
5) ☐ ÷ 4 = 4	6) ☐ ÷ 4
7) 42 ÷ 6 = ☐	8) 56 ÷ ☐ = 8
9) 28 ÷ ☐ = 4	10) 100 ÷ 10 = ☐
11) 36 ÷ ☐ = 6	12) 63 ÷ 9 = ☐
13) 80 ÷ ☐ = 10	14) 81 ÷ 9 = ☐

Name: _____ 144

Curriculum Connection
C2.1

Word Problems – Writing Division Equations

Questions | Answer the questions below

1) Neil has 180 crayons that he wants to split into equal groups of 20. Which equation shows how many groups (g) of 20 he will have?

$g \div 180 = 20$	$\frac{180}{20} = g$
$\frac{g}{20} = 180$	$180 \div g = 20$

2) K[illegible] over for a big party. She wants to have 2 treats for each friend. W[illegible]ch equ[illegible] how many treats in total (t) she will need?

$\frac{25}{2} =$ [illegible]	$25 \div t = 2$
[illegible]	$\frac{t}{25} = 2$

3) The kindergarten class has 300 block[illegible] stud[illegible] Which equation shows how many blocks (b) each student can have[illegible]

$\frac{300}{15} = b$	$\frac{30}{}$ [illegible]
$b \div 300 = 15$	[illegible] 300

4) Mrs. Wilson brought in 90 candies for her students. She has 30 st[illegible] equation shows how many candies (c) each student will get?

$c \div 90 = 30$	$\frac{90}{30} = c$
$90 + c = 30$	$30 \div c = 90$

5) Mr. Rogers is donating $1000 to different charities. He gives $200 to the charities of his choice. Which equation shows how many charities (c) he donated to?

$c \div 1000 = 200$	$1000 \div 200 = c$
$200 \div c = 1000$	$\frac{1000}{c} = 200$

Name: _____ 146

Curriculum Connection
C2.1, C2.2, C2.3

Word Problems – Solving Division Equations

Questions Solve the word problems using equations and variables

1) Mary bought 56 burgers that came packed in packs of 8. How many packs did she buy?

2) C[illegible] cooped[illegible]ps of ice cream evenly onto 8 cones. How many scoops did ea[illegible]?

3) Jade is putting 72 onions into b[illegible]ch b[illegible]lds 8 onions. How many boxes does he need?

4) A group of 9 friends buys a bunch of cookies. Each frien[illegible]t 6 cookies. How many cookies did they buy?

5) In gym class, a group of 49 students were divided into 7 groups. How many students are in each group?

Name: _____ 147

Curriculum Connection
C2.1, C2.2, C2.3

Math Pictionary: Division Equations Challenge

Objective

What are we learning about?

To reinforce students' understanding and application of division through solving word problems in a fun and interactive drawing game.

Materials

What you will need for the activity.

- Index cards
- Markers or
- Whiteboard sheet
- Timer or stopw (opti

Instructions

How you wi ple

1. Prepare a stack of index cards with division pro
2. Divide the class into two teams.
3. One student from Team A will draw a card and the e on the whiteboard.
4. Team B works together to solve the equation as quickly as po correct order of operations. They have 1 minute to discuss a quation.
5. If Team B solves the equation correctly within the time limit, they a point. If they answer incorrectly, Team A has a chance to solve it and earn a point.
6. Next, a student from a winning team (either team A or B) writes an equation on the board, and the other team works together to solve it.
7. Alternate turns between the teams, ensuring that each student gets a chance to write an equation on the board.
8. Continue the game until all index cards have been used or the designated game time is up.
9. Keep track of the points on a scoreboard. The team with the most points at the end of the game wins.

Name: _____ 148

Curriculum Connection
C2.1, C2.2, C2.3

Math Equations | Cut out the equations below

Index Cards

There are 24 candies, and each child gets 4. How many children are there?

A farmer h 48 apples and packs them into bags with 6 apples each. How many bags does ?

A cl s 3 ts and 5 tables. How many students sit at each table?

There are 56 shel ch shelf holds 8 books. How many shelves are there?

A baker has 36 cupcakes s th xes of 6. How many boxes does he need?

A library has 72 books and wants to bute th into 9 groups. How many books are in each group?

There are 40 marbles, and each jar can hold 5 mar ow man are needed?

A teacher has 90 pencils and gives 10 pencils to each student. ts get pencils?

A family has 20 oranges and divides them into 4 equal bags. How many oranges are in each bag?

A gardener has 50 flowers and plants them in rows of 5. How many rows are there?

There are 80 students, and they are divided into groups of 8. How many groups are there?

A store has 64 boxes of crayons and arranges them into 8 stacks. How many boxes are in each stack?

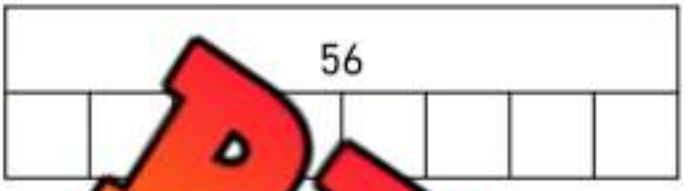
Name: _____ 151

Curriculum Connection
C2.2

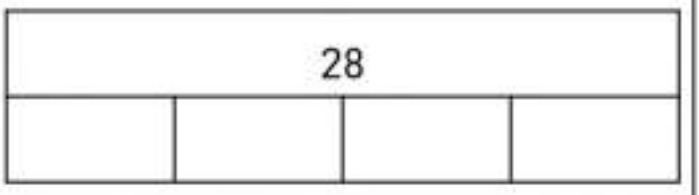
Division – Bar Model

Instructions Use the bar model to answer the division questions below.

1) 56 ÷ 8

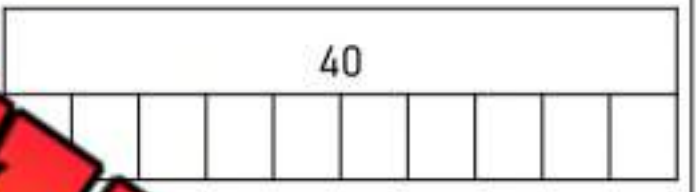


2) 28 ÷ 4

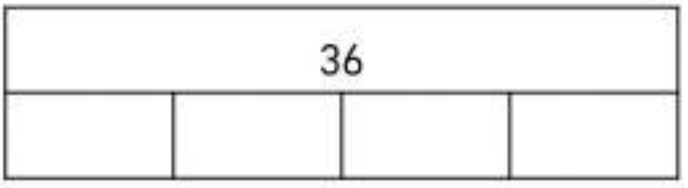


3)

4) 40 ÷ 10

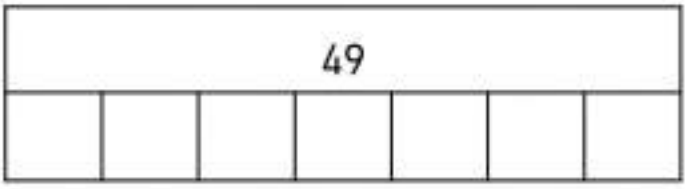


5) 36 ÷ 4

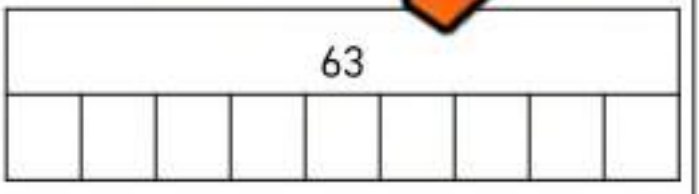


6) 35 ÷ 5

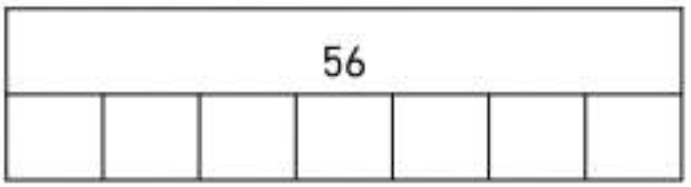
7) 49 ÷ 7



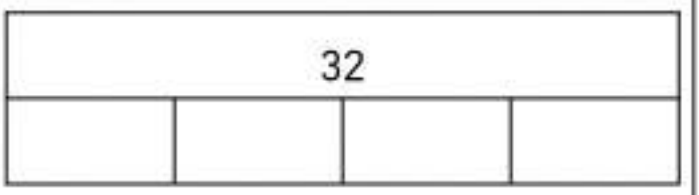
8) 63 ÷ 7



9) 56 ÷ 7



10) 32 ÷ 4



Name: _____ 152

Curriculum Connection
C2.2

Division Word Problems – Bar Model

Instructions Use the bar model to answer the division questions below

1) Richard has 48 candies to give away to his 6 friends. How many candies will each friend get?

48					

Division Equation Sentence: ____ ÷ ____ = ____

2) Emma and her 5 friends made $66 selling cookies at a bake sale. How much money will each of the friends get?

66					

Division Equation Sentence: $\frac{\square}{\square}$ = ____

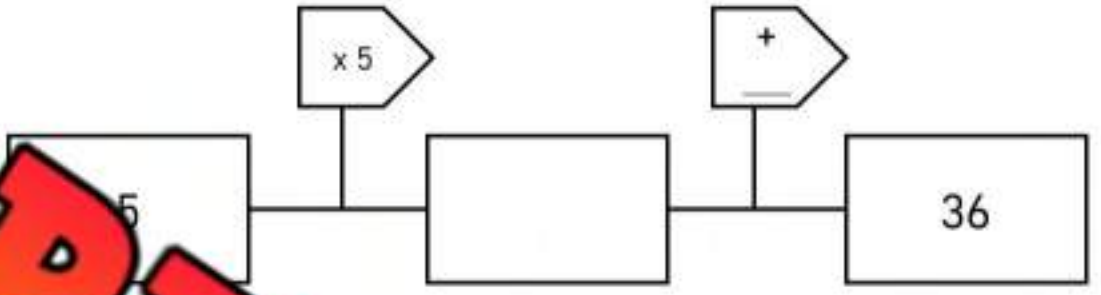
Name: _____ 154

Curriculum Connection
C2.2

Flag Diagrams

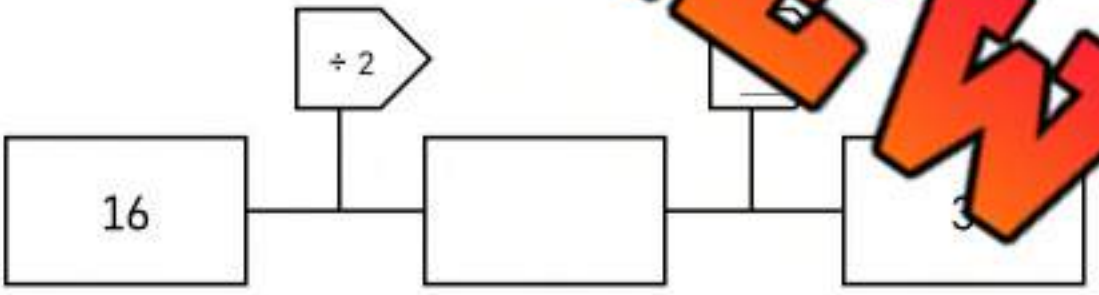
Questions Fill in the blanks to complete the flag diagrams below

1)

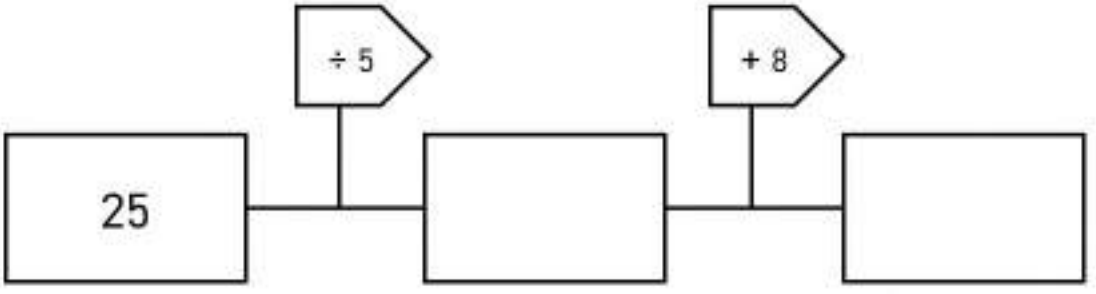


2)

3)



4)



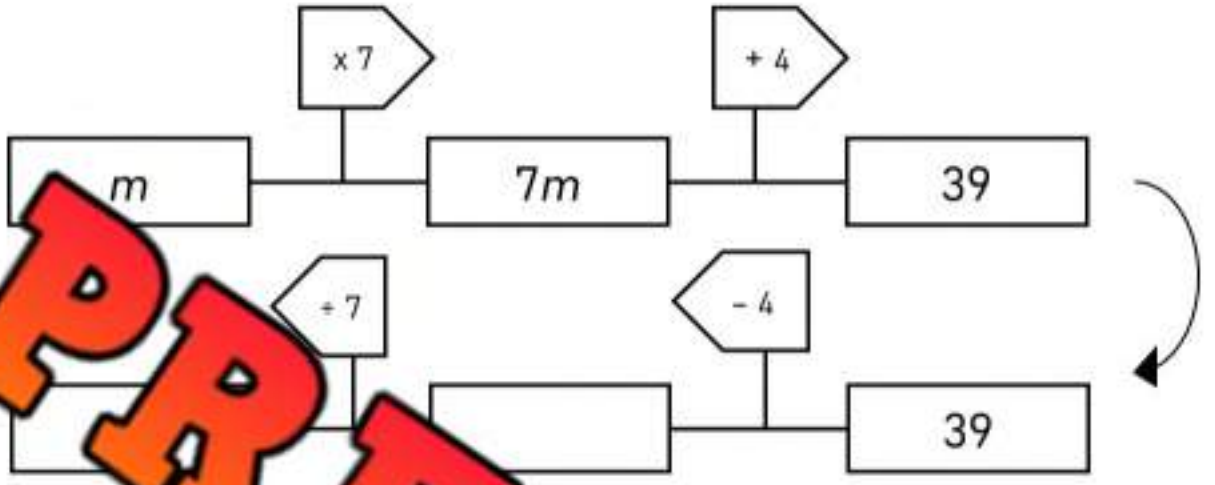
Name: _____ 155

Curriculum Connection
C2.2

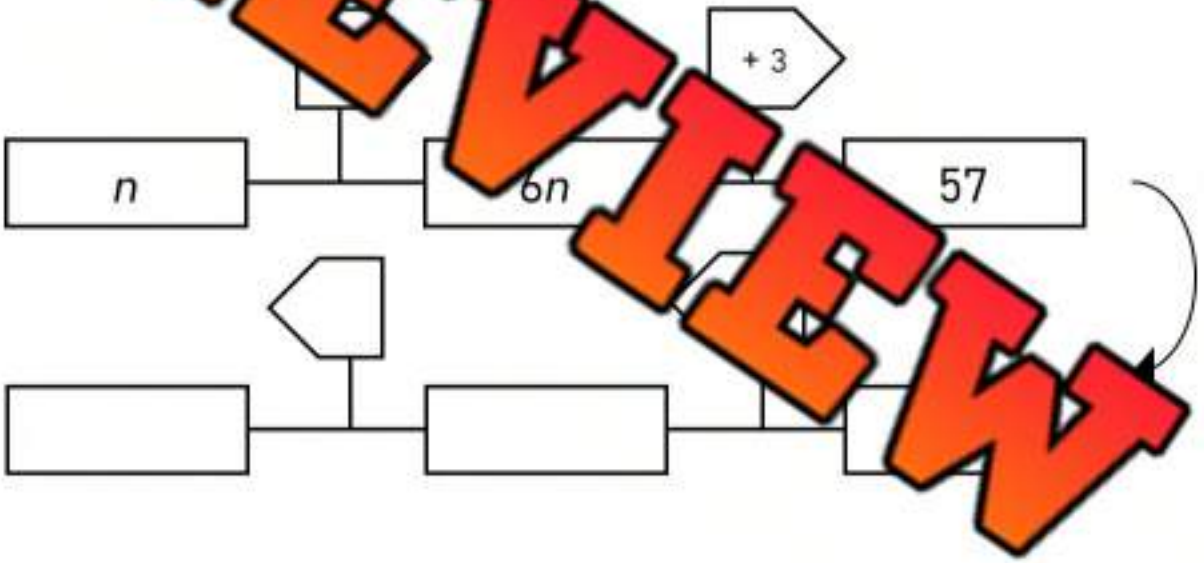
Reverse Flag Diagrams

Questions Fill in the blanks to complete the flag diagrams below

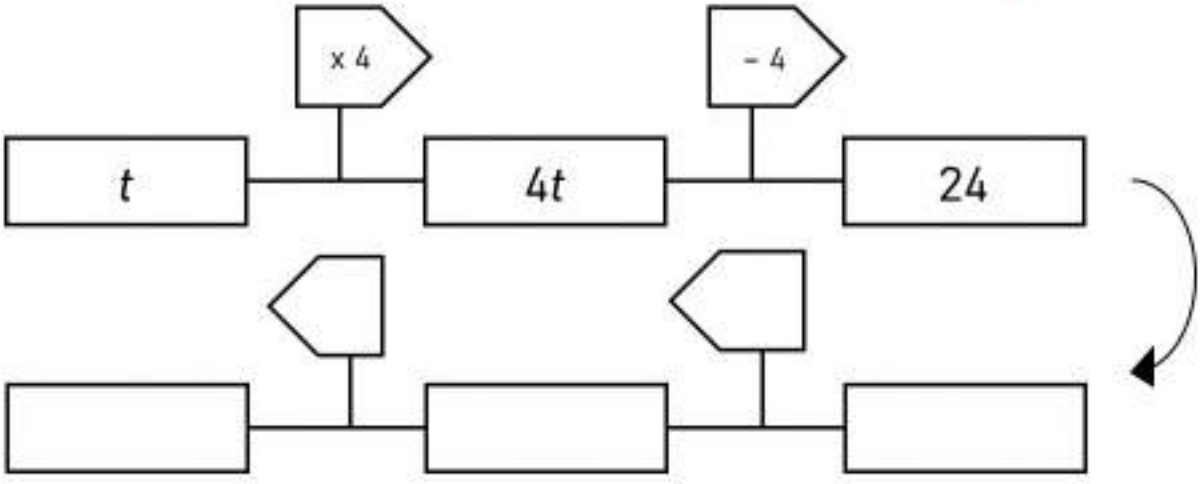
1)



2)



3)



Name: _____ 156

Curriculum Connection
C2.2

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 acti

1. Print the Jeopardy board on the next p
2. Divide the class into two teams.
3. Ask one team to go first by selecting a point value.
4. Read the question aloud from the point 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: _____ 157

Curriculum Connection
C2.2

Jeopardy Questions | Ask students the questions below

$100	$200	$300	$400	$500
2x = 6. Find x.	4y = 24. Find y.	5z + 10 = 25. Find z.	If 3 apples cost $15, what is the cost per apple?	Jack has twice as many toy cars as Oliver. If the total is 18 cars, how many does Oliver have?
6 + m = Fi	z k	10 = 2t + 6. Solve for t	If there are 28 apples in a basket and the number of apples is 4 times the number of oranges, how many oranges are there?	Sophia's sister is 30 years old. She is 4 years older than twice Sophia's age. How old is Sophia?
8 - p = 3. Find p.	7e - 14 = 21. What is e?	5 is at is	If Sam had 45 bles and lost ow he has y did	A rectangle has a perimeter of 120 cm. If the length is twice the width, what are the length and width?
3 + n = 9. Find n.	2d + 4 = 14. Find d.	18 = 3b - 3. Find b.	encils does cost	has 3 times as many as Jerry. Together they 0 books. How m oks does each
10 ÷ 2 = ?	6 ÷ c = 2. Find c.	4r + 5 = 29. Find r.	John had 80 pencils. After using some for his art projects, he now has 55 pencils left. How many pencils did he use?	Jason ears old. He is 6 years older than twice his brother's age. How old is his brother?
5 = x - 3. What is x?	15 ÷ 3 = ?	20 ÷ 5 + 23 = ?	There are 16 marbles in a jar. If you have 4 times as many marbles as Sarah, how many does Sarah have?	Emma's aunt is 36 years old. She is 12 years older than three times Emma's age. How old is Emma?

Name: _____ 158

Curriculum Connection
C2.4

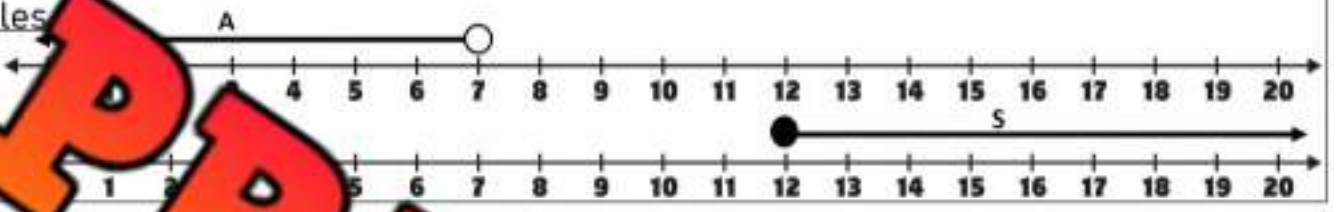
Introduction to Inequalities

Inequalities are used to tell the relative size of two expressions or numbers. We can use the greater than sign (>), or the smaller than sign (<). We can also use a new sign (≥) to show that a value is equal to or greater/less than the other value.

We often use a number line to graph the range of values that hold true for an inequality. An open dot on a number line is used when an inequality involves "less than" or "greater than", and a closed dot is used when it also includes "equal to".

Examples

A < 7



S ≥ 12

Questions

Graph the inequality on the number line and write the word form

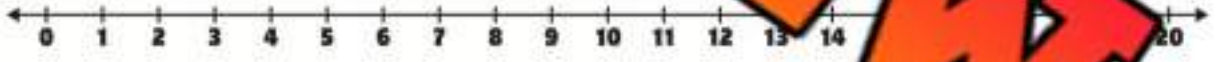
1) X ≥ 9

Word Form - x is greater than or equ

2) X ≤ 13

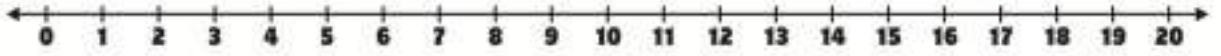
Word Form - _____

3) X < 18



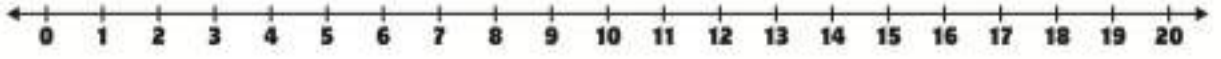
Word Form - _____

4) X > 15



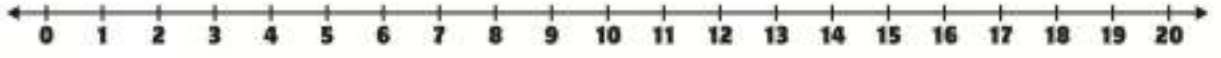
Word Form - _____

5) X ≥ 6



Word Form - _____

6) X ≤ 3



Word Form - _____

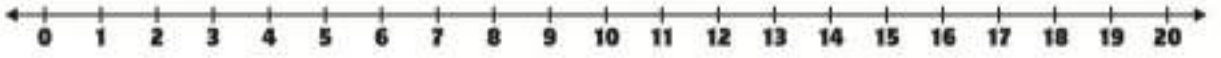
Name: _____ 159

Curriculum Connection
C2.4

Introduction to Inequalities

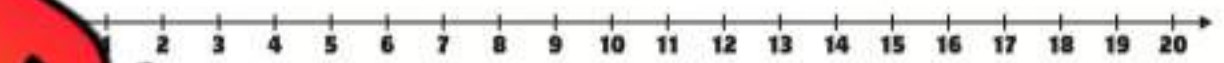
Part 1 — Graph the inequality on the number line and write the word form

1) X > 2



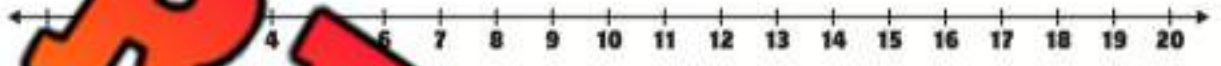
Word Form - _____

2) X ≤ 14



Word F_____

3) X < 1



Word Form - _____

4) X > 4

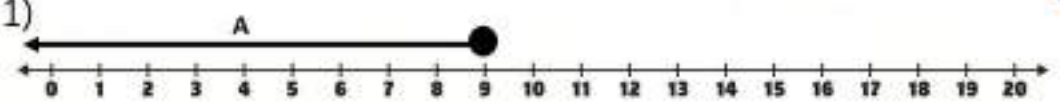
Word Form - _____

5) X ≥ 7

Word Form - _____

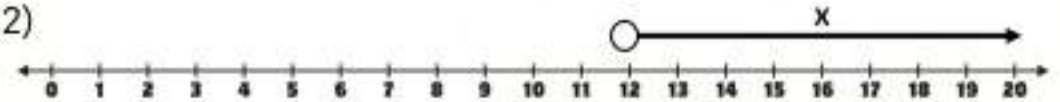
Part 2 — Write the inequality shown by each num_____ line

1)



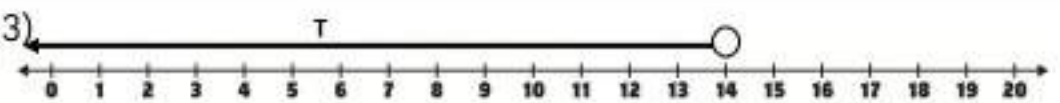
_____swer

2)



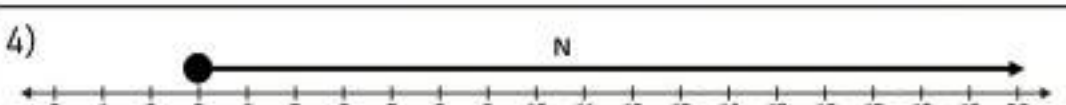
Answer _____

3)



Answer _____

4)



Answer _____

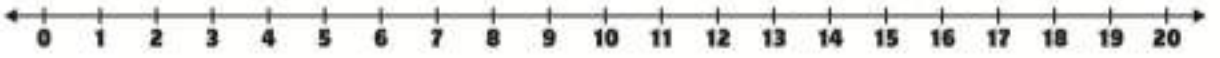
Name: _____ 160

Curriculum Connection
C2.4

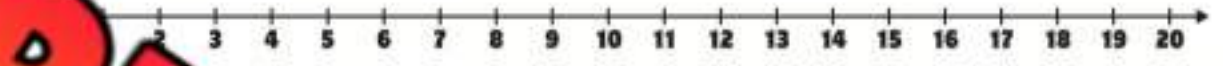
Addition Inequalities

Questions Graph the addition inequalities using the number line

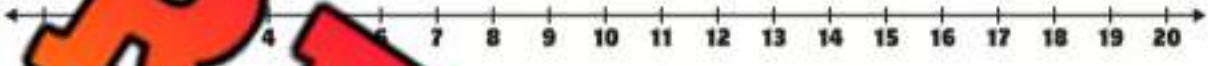
1) $3 + a > 10$



2) $8 + b \leq$



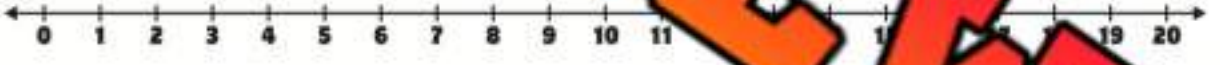
3) c



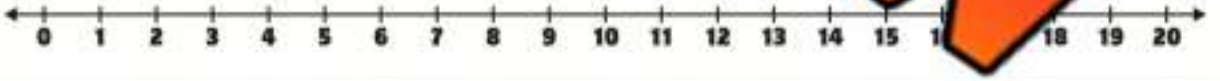
4) $d + 10 \leq 11$

5) $13 + e \geq 15$

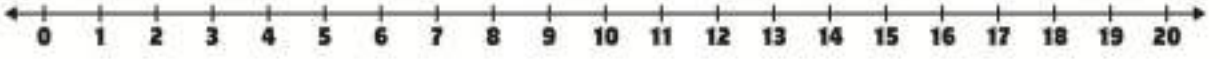
6) $5 + f > 18$



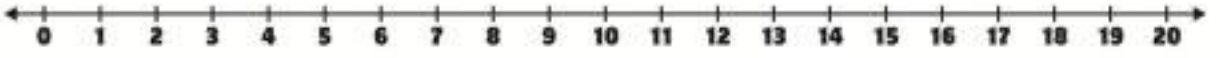
7) $g + 1 > 7$



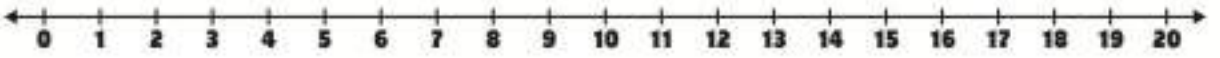
8) $10 + h \geq 18$



9) $12 + m > 20$



10) $n + 11 \leq 16$



Name: _____ 162

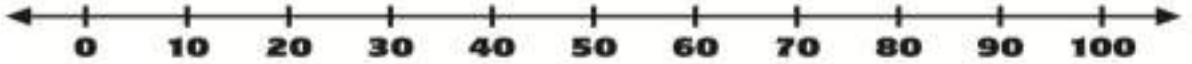
Curriculum Connection
C2.4

Inequalities to 100

Part 1

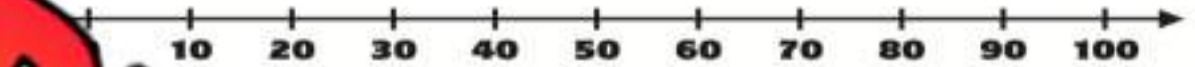
Graph the inequality on the number line and write the word form

1) X > 40



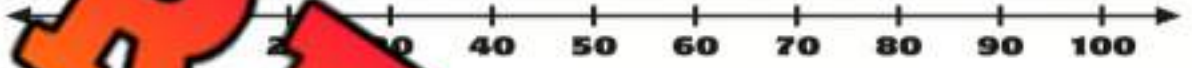
Word Form - _____

2) X ≤ 60



Word Form - _____

3) X <



Word Form - _____

4) X > 40

Word Form - _____

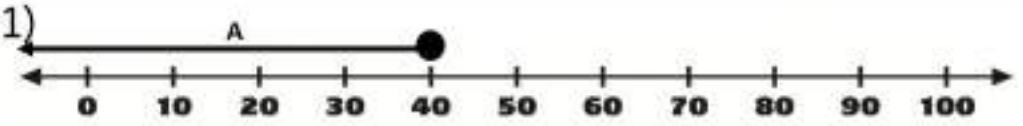
5) X ≥ 10

Word Form - _____

Part 2

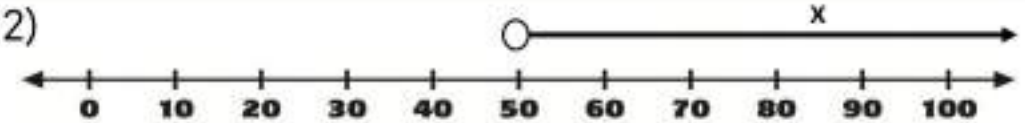
Write the inequality shown by each num ne

1)



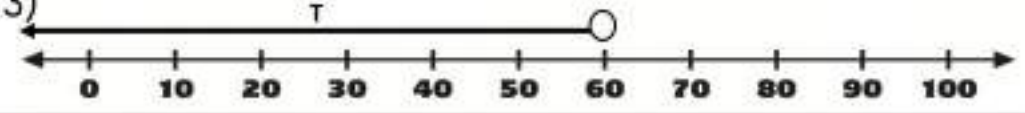
swer

2)



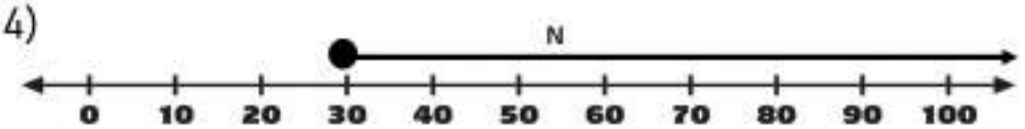
Answer

3)



Answer

4)



Answer

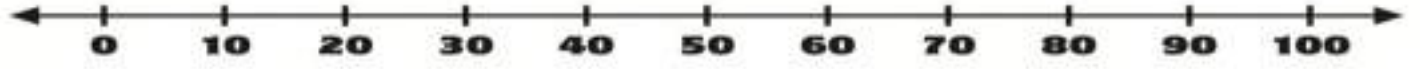
Name: _____ 163

Curriculum Connection
C2.4

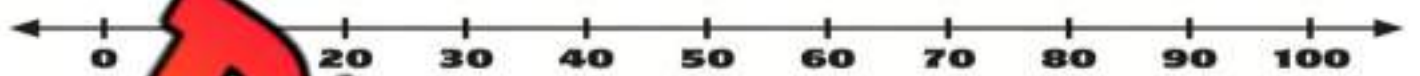
Addition and Subtraction Inequalities to 100

Part 1 Graph the addition inequalities using the number line

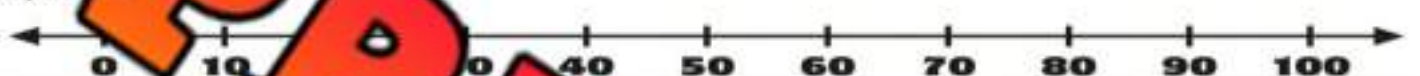
1) $40 + a > 70$



2) $60 + b \leq 80$



3) c +



4) $d + 20 \leq 50$

5) $40 + e \geq 80$

Part 2 Graph the subtraction inequa sing r line

6) $50 - f > 30$

7) $g - 10 > 70$

8) $50 - h \geq 30$

9) $100 - m < 80$

10) $n - 10 \leq 70$

Name: _____ 166

Curriculum Connection
C2.4

Inequalities – Multiple Choice

Questions | Circle the values that satisfy each inequality

1) $x > 6$

5 8 10 3

2) $x < 9$

7 2 15 23

3) x

17

4) $x > 5$

12 3 1 6

5) $x < 8$

2 6 15 33

$x \leq 18$

12 1

7) $x > 3$

15 2 12 23

8) x

15 5

9) $x \leq 16$

15 5 16 23

10) $x > 14$

12 18 15 13

11) $x < 19$

25 18 13 23

12) $x < 24$

15 28 10 35

Name: _____ 167

Algebra Quiz - Equations

Part 1 Put a slash (≠) through the equal sign if it is not balanced

1) 37 + 12 = 48	2) 34 + 7 = 41	3) 49 - 5 = 45
4) [illegible] 59	5) 7 x 4 = 21	6) 70 ÷ 7 = 10

Part 2 [illegible] number to balance the equation

1) 43 + 8 = ☐	[illegible] 30	3) 29 + ☐ = 36
4) 42 + 17 = ☐	5) ☐ + 55	[illegible] + ☐ = 98
7) 33 - 7 = ☐	8) ☐ - 14 = 46	52
10) 65 - 13 = ☐	11) ☐ - 22 = 60	12) 91 - 15 = ☐
13) ☐ x 6 = 24	14) 7 x ☐ = 42	
15) 48 ÷ ☐ = 6	16) 54 ÷ 6 = ☐	

Part 3 Find out the value of the variable

$7 + n = 17$ n =	$n - 8 = 22$ n =	$2n = 18$ n =	$\frac{30}{n} = 10$ n =
$n + 12 = 35$ n =	$n - 22 = 75$ n =	$8n = 24$ n =	$\frac{36}{6} = n$ n =

Part 4 Find out the value of the variable

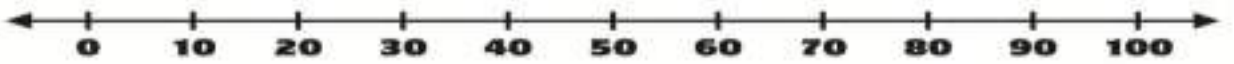
a + b + c = 1 c = 12 _____ + _____	n + y + t = n = 3 y = 22 t = 8 _____ + _____ + _____ = _____
a - b = c a = 26 _____ - _____ = c c =	= f e = 32 n = 16 _____ = f f =
a x b = c a = 8 b = 4 _____ x _____ = c c =	= 4 = k _____ k =

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

Zakk shoveled snow all day and earned $135. He now has $215 in his bank account. How much money did he have in his bank (b) account before he was paid for shoveling snow?

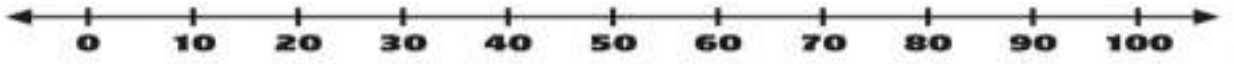
Part 6 — Graph the inequality on the number line and write the word form

1) X > 60



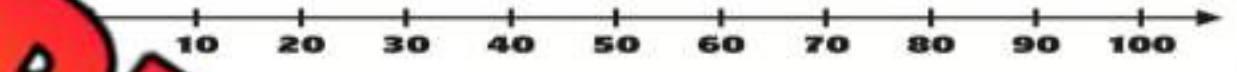
Word Form - _____

2) X ≤ 16



Word Form - _____

3) X < 12



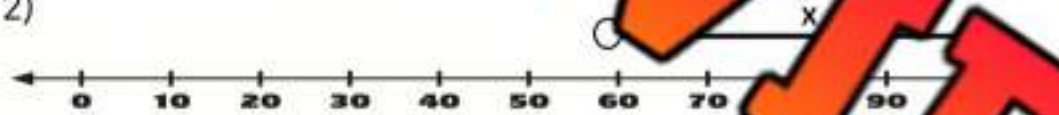
Word _____

Part 7 — ...shown by each number line

1)

Answer _____

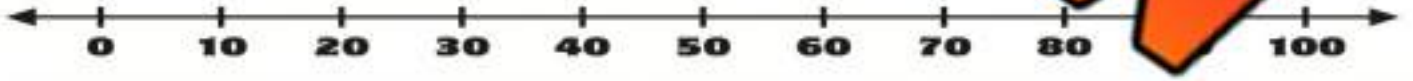
2)



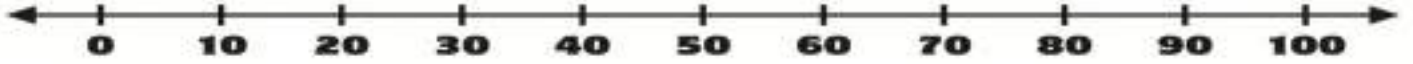
Answer _____

Part 8 — Graph the addition and subtraction ine... usin... number line

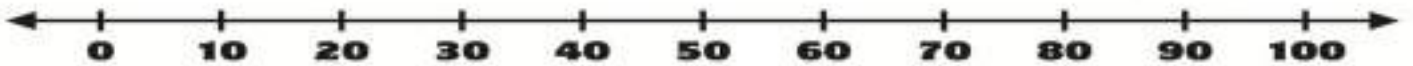
1) 50 + a > 70



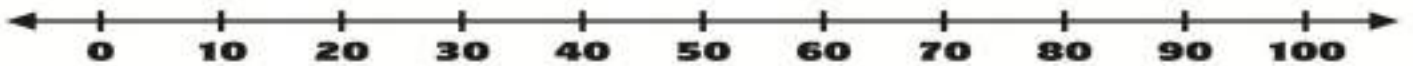
2) 40 + b ≤ 80



3) c - 20 > 60



4) 40 - d ≤ 20



Grade 5
C3. Coding

	Curriculum Expectations	Pages That Cover the Expectations
C3.1	roblems and create computational ns of mathematical situations y writ xecuting code, including cod ves quential, concurrent, repe nd ne nts	171 – 176, 181 – 182, 185 - 210
C3.2	read and alter existing incl code that involves sequential, c ren repeating, and nested events, a esc how changes to the code affect the outcomes	7 – 180, 182 – 188 - 189

Name: _____ 171

Curriculum Connection
C3.1

Writing Code

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

Robot moved _____ squares

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

Line 1: _____

Line 2: _____

3: _____

2. Write the code that gets [illegible] to the [illegible] and then home.

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____

Robot moved _____ squares

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

Line 1: _____

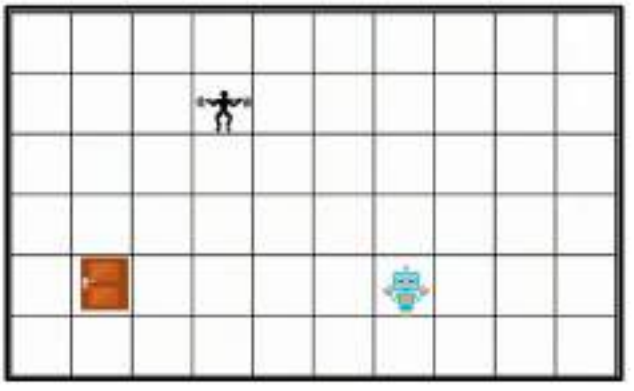
Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

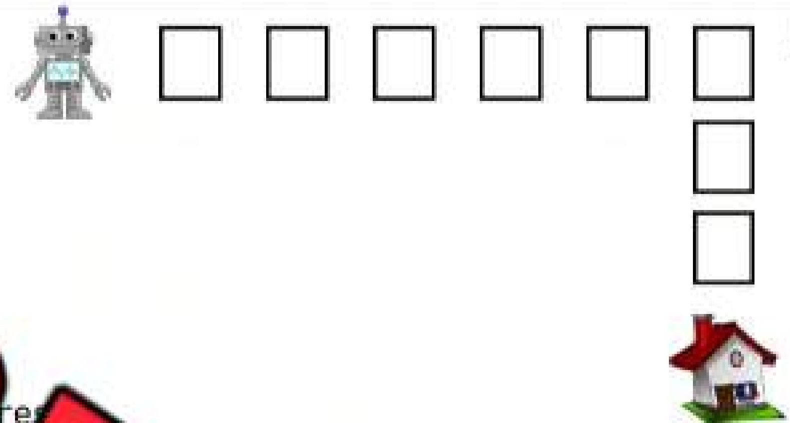
Line 6: _____



Robot moved _____ squares

Reading Code – Creating Programs

Question Read the code and create the program



Example

Code
go ri[illegible] 6
go d[illegible]
op[illegible]

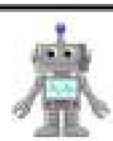
Robot moved [illegible] squares

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: _____ 175

Curriculum Connection
C3.1

Reading Code – Creating Programs

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

1.

Code

go left 3
go [illegible] 3
[illegible]
open door

Robot moved _____ squares

2.

Code

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

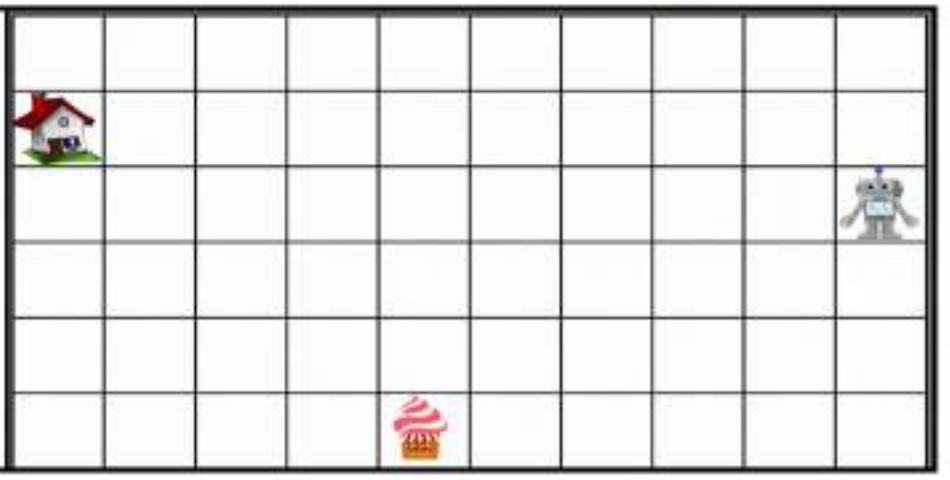
Robot moved _____ squares

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
C3.2

Fixing Code

Questions 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]wn 5
_____ - [illegible] 2
_____ - [illegible]sch
_____ - go left
_____ - ente[illegible]

2. Go to school and the[illegible]

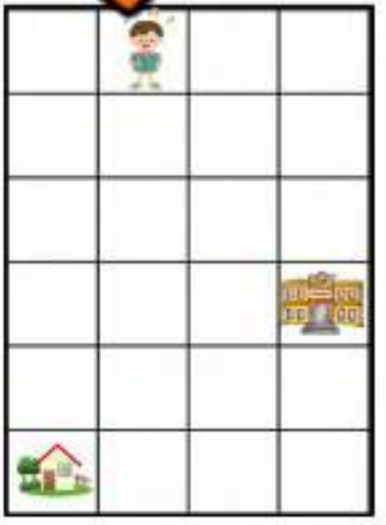
Code

_____ - 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: _____ 179

Curriculum Connection
C3.2

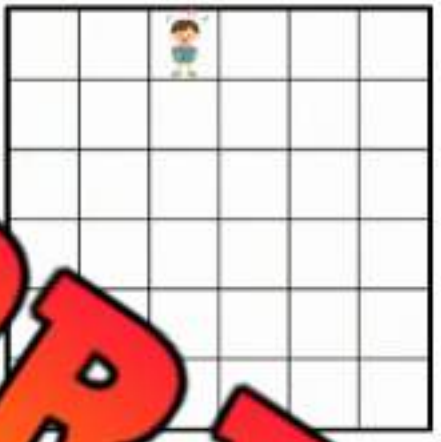
Interpreting Code

Questions 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



YES NO

Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____

2.

Code

go down 4
go right 4
enter library

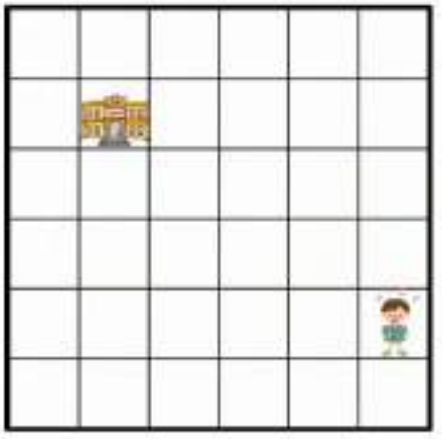
YES NO

Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____

3.

Code

go up 3
go right 4
enter library



YES NO

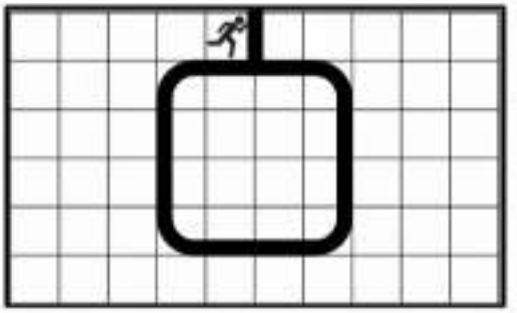
Line 1: _____
Line 2: _____
Line 3: _____
Line 4: _____
Line 5: _____
Line 6: _____

Name: _____ 181

Curriculum Connection
C3.1

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

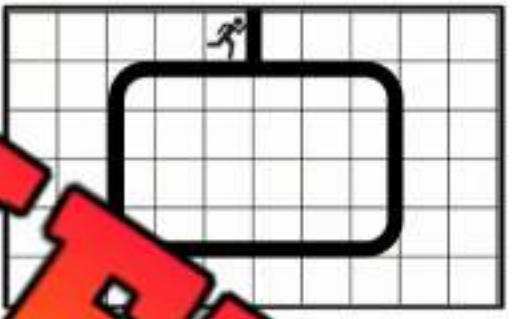


Example
loop 5 times
    go right 3
    go down 5
    go left 5
    go up 5
    go right 2
go right 1

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

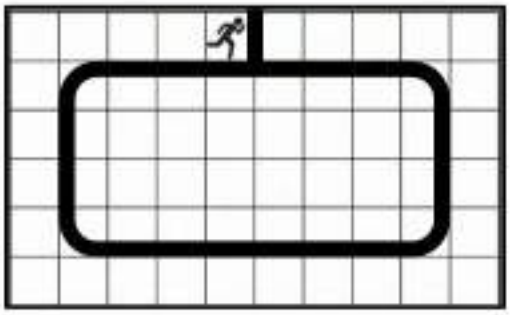
1. Use ... to send ... around the track 5 times. (Don't forget to cross the finish line!)

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 forg... ...nish line!)

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



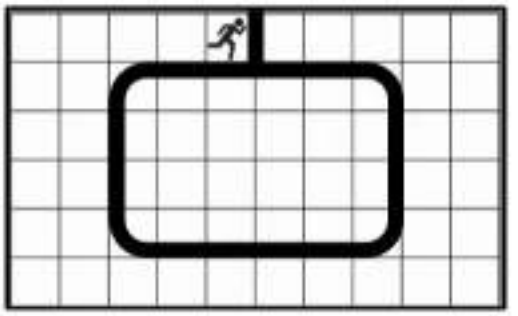
Name: _____ 182

Curriculum Connection
C3.1, C3.2

Writing Code - Loops

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

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

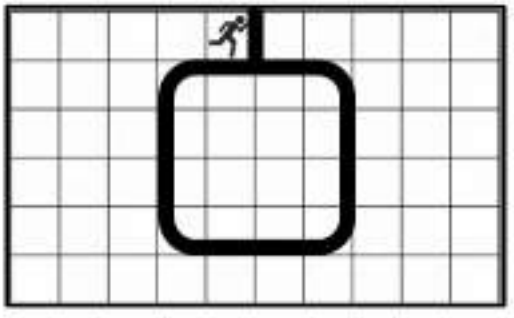


1 lap = 100 metres

2. Use a loop to send the runner 1200 metres.

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

1 lap = 200 metres



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: _____ 183

Curriculum Connection
C3.2

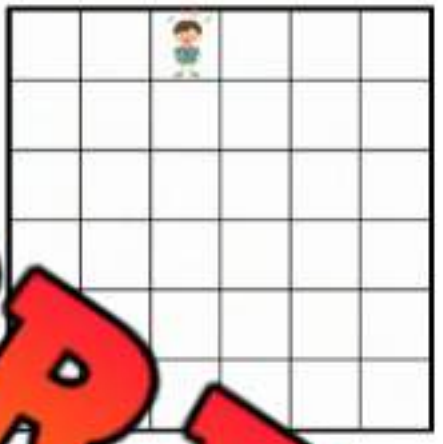
Interpreting Code

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

1.

Code

Loop 2 times
  go down
Loop 2 tim
  go le
go d
enter library



YES NO

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

2.

Code

loop 4 times
  go down 1
  go right 1
enter library

YES NO

Li
2:
e 3
Line 4:

3. **Code**

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

YES N

Line 1: _____

Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____

Name: _____ 185

Curriculum Connection
C3.1

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"

...e3 = "ER"

...DE"

...ode

print (..., Code2 ... e5, ...de4)

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)

The Computer Program:

_____

_____

_____

_____

3.

Code

Code1 = "A"

Code2 = "PRO"

Code3 = "MER"

Code4= "GRAM"

Code5= "ING"

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

The Computer Program:

_____

_____

_____

_____

Name: _____ 187

Curriculum Connection
C3.1

Working with Code

Code Bank

JillPeriod1 = 3
JillPeriod2 = 7
JillPeriod3 = 5
JillTotal = JillPeriod1 + JillPeriod2 + JillPeriod3
JillShots = 15

Example - The Computer Program:

print ("In the second period of the game, Jill scored" JillPeriod2 "points.")

In the second period of the game, Jill scored 7 points.

Questi... bank to read the codes. Write what the program will say

1. **Co...**

print ("In the first ... of the game, Jill scored JillPeriod1 "points.")

...Computer Program:

_____ _____ _____

_____, _____

_____

2. **Code**

print ("Jill had" JillShots "shots on goal yesterday.")

The Computer Prog...

_____ _____ _____ _____

_____ _____

3. **Code**

print ("Jill scored" JillTotal "points in the game yesterday.")

The Computer Program:

_____ _____ _____

_____ _____ _____ _____

_____

Name: _____ 188

Curriculum Connection
C3.1, C3.2

Coding – Solving + - x ÷

Part 1 Write what the computer would reply with based on the code written

Code Written	The Computer Replied
print (5 + [illegible] 8)	1 6
print [illegible]	_ _
print (14 - 5 [illegible]	
print (22 - 7 - 9)	
print (5 * 3 * 2)	_ _

Code Written	The Computer Replied
print (6 * 2 * 3)	_ _
print (80 ÷ 2 ÷ 2)	_ _
print (40 ÷ 4 ÷ 5)	_
[illegible]t (23 + 12 - 15)	_ _
pri[illegible]	_ _

Part 2 Write what the computer would reply [illegible]ed on [illegible]de written

Code Written	The Com[illegible]
number = 6 bignumber = number * 5 print ("The secret number is" bignumber".")	_ h _ _ _ _ _ e _ _ _ m _ _ _ _ _ _ _ _ _
code = 48 codeword = code ÷ 2 print ("The secret code is" codeword".")	_ _
pin = 9 bank# = pin * 5 print ("the bank pin number is" bank#".")	_ _

Name: _____ 190

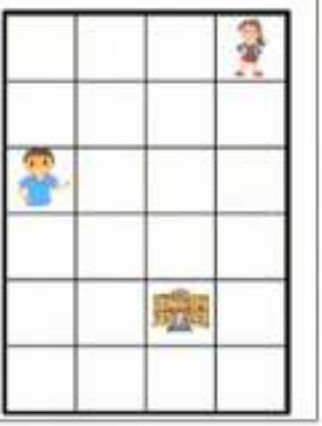
Curriculum Connection
C3.1

Concurrent Coding

Concurrent codes are events that happen at the same time. It is the opposite of **sequential codes**, which happen one after the other.

Example – race to school – concurrent coding

Boy	Go down 2	Go right 2	Enter school
Girl	down 4	Go left 1	Enter school

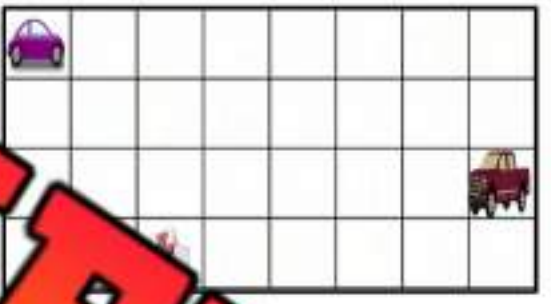


...es traveled – (boy 4) girl 5

Questions

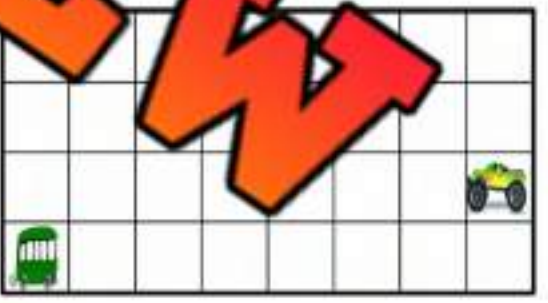
...wo se... codes as the vehicles race to the store

Car			
Truck			



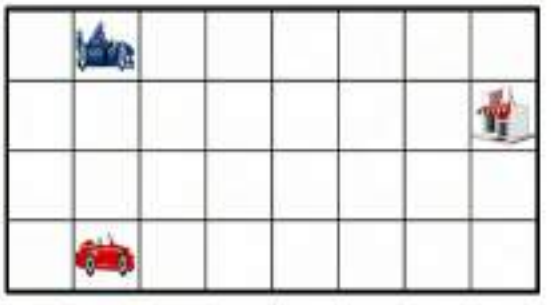
Who won? Spaces traveled – car ____ tru...

Bus			
Monster Truck			



Who won? Spaces traveled – Bus ___ Monster Truck ___

F1			
Sports car			



Who won? Spaces traveled – F1 _____ Sports Car _____

Name: _____ 191

Curriculum Connection
C3.1

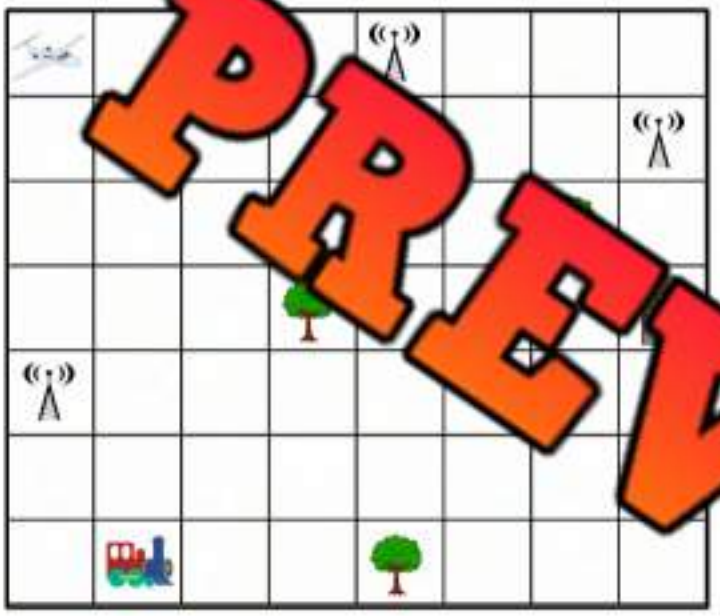
Concurrent Coding

Part 1 Write two separate codes as the train and plane race to the building

Look out for the towers and trees! Make sure you code around these obstacles.

Plane

Train



Who won?

Train = _____ spaces

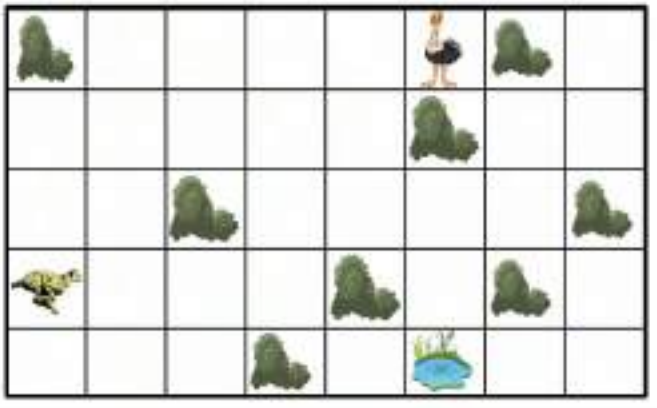
Plane = _____ spaces

Part 2 Write two separate codes as the cheetah and [illegible] watering hole

Look out for the bushes! Make sure you code around them.

Cheetah

Ostrich



Who won?

Cheetah = _____ spaces

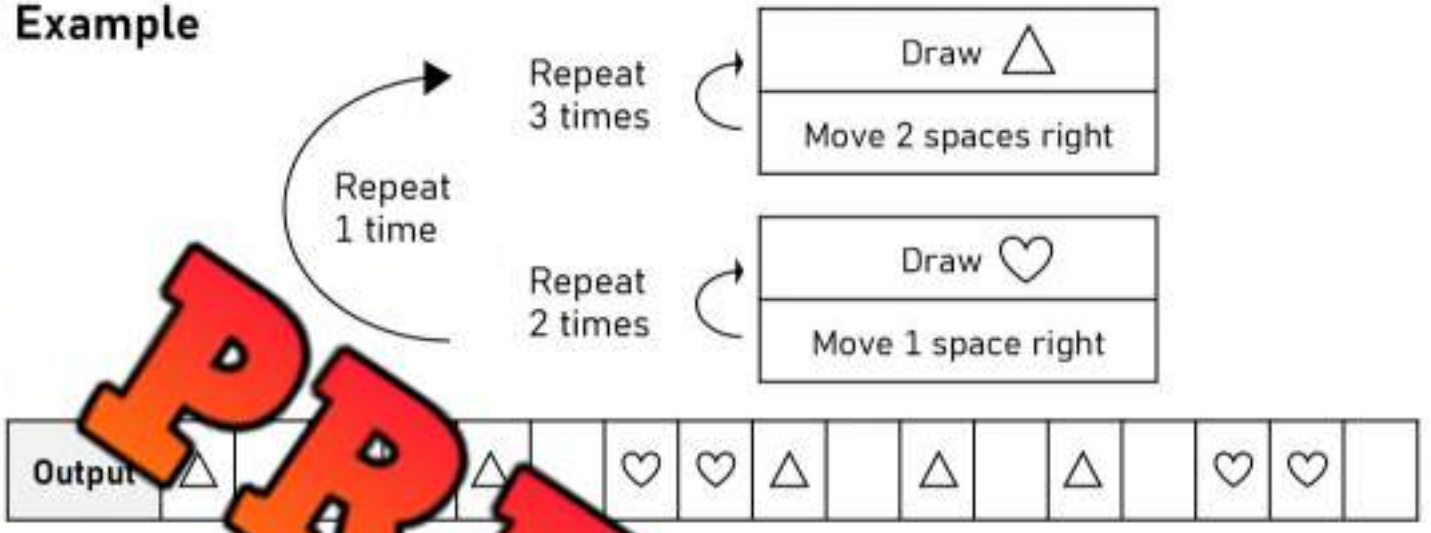
Ostrich = _____ spaces

Name: _____ 192

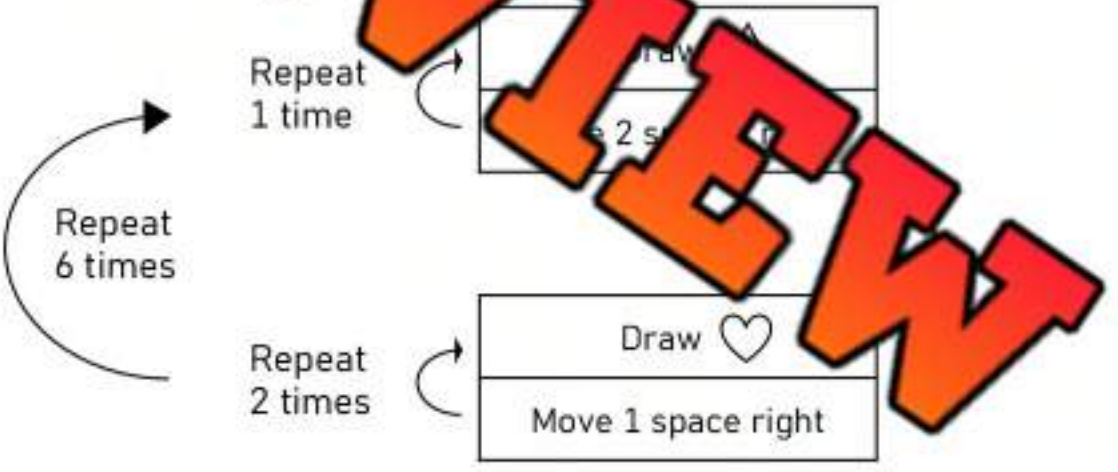
Curriculum Connection
C3.1

Nested Loops

Example



Code Read the [illegible] output – what it will create.

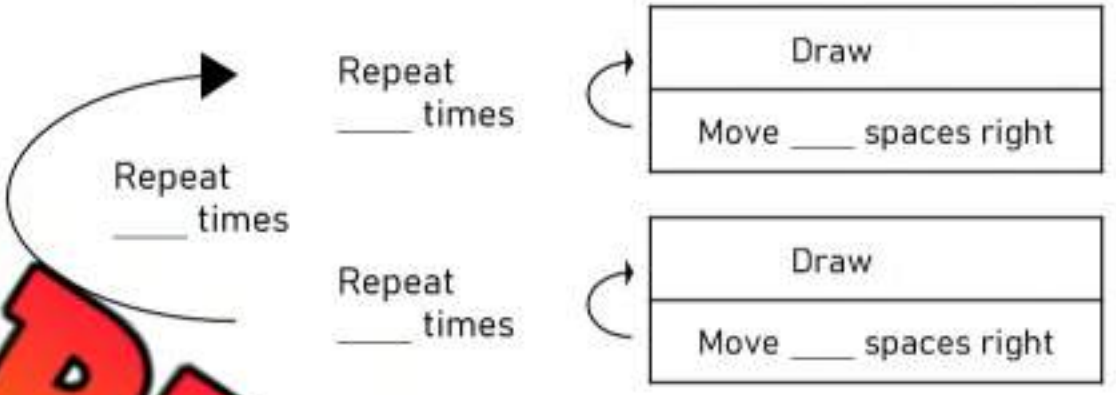


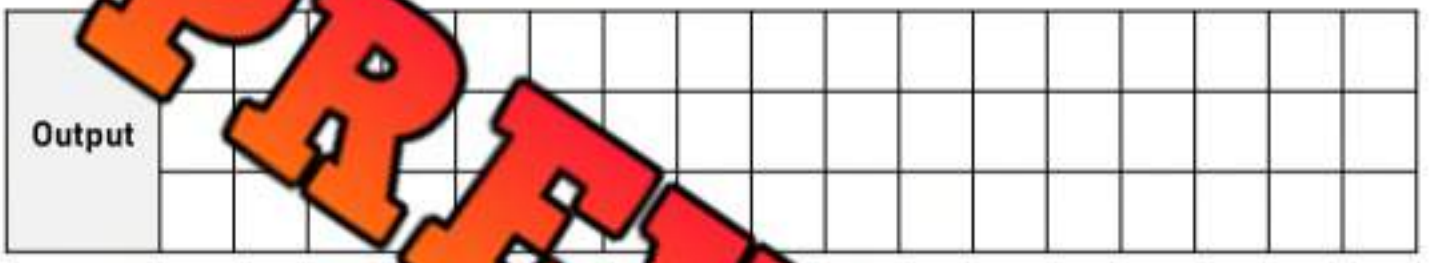
Output																

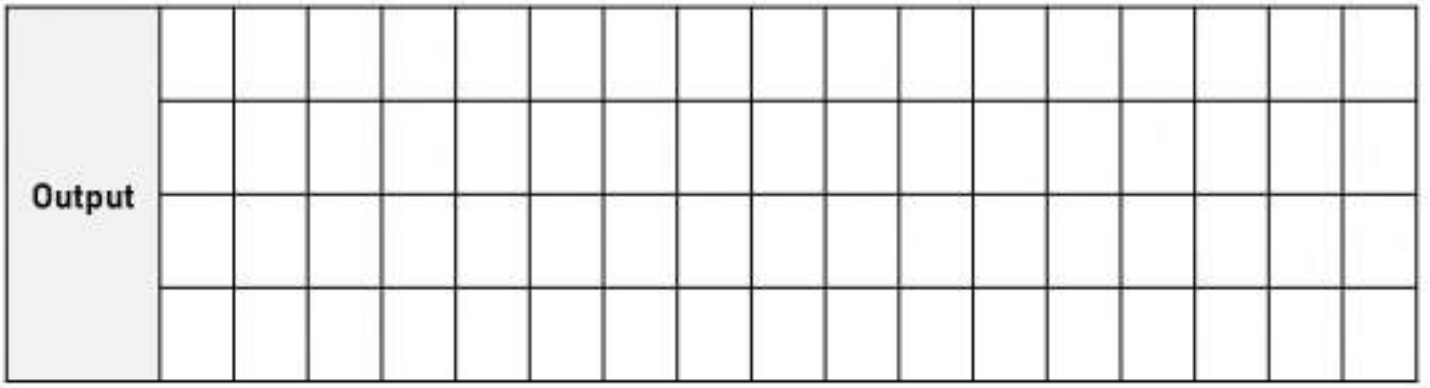
Name: _____ 193

Curriculum Connection
C3.1

Code	Draw your own nested loops below. Use the organizer for the first one and create your own for the second.







Name: _____ 194

Curriculum Connection
C3.1

If Statements – Conditional Coding

An if statement allows a code to be run if an event has happened. If the event does not happen, the code is not run. All interactive games use if statements. For example, when a game has a button in it, the button will have an if code. This means that if the button is pushed, then a code will run that causes something to happen.

Example Code - If player gets 50 points, then print "Great Job!"

Questions - Calculate the answer to the question and then run the code

	Written	The Computer Replied
If answer is >[illegible] print "[illegible]tic" If answer is >20, [illegible] print "[illegible]te" Answer: run 6 x 4		
If answer is <50, then print "Better [illegible]ext ti[illegible] If answer is >50, then print "Wow, great job!" Answer: run 7 x 8		
If student mark is >90/100, then print "A+" If student mark is <90/100, then print "Study more!" Student mark: run 78/100		
If student mark is >50/100, then print "You passed" If student mark is <50/100, then print "You failed" Student mark: run 59/100		
If player has >100 points, then print "You win" If player has <100 points, then print "You lose" Points: run 8 x 12		

Name: _____ 195

Curriculum Connection
C3.1

If Statements – Dice Game

The object of the game is to get as many points as you can. Follow the if/then statements to get points.

Instructions:
1. Start at question 1. Read the if/then statement to get points
2. Go through all 10 questions and add up your points at the end

Questions: Use a dice to play the game below. Follow the if/then codes

If/Then Code	Point Total
1) If you roll a number, then you get 10 points If you roll a number, you get 0 points	
2) If you roll a 6, then you get 10 points If you don't roll a 6, then you get 0 points	
3) If you roll a 3 or 4, then you get 10 points If you don't roll a 3 or 4, then you get 0 points	
4) If you roll a 2, then you lose all your points If you roll any other number, then you get 0 points	
5) If you roll 3 or less, then you get 10 points If you roll 4 or more, then you get 0 points	
6) If you roll a 1 or 6, then you get 10 points If you don't roll a 1 or 6, then you get 0 points	
7) If you roll 2 or more, then you get 5 points If you roll a 1, then you lose 5 points	
8) If you roll an odd number, then you get 10 points If you roll an even number, then you get 0 points	
9) If you roll a 3, then you get 10 points If you don't roll a 3, then you get 0 points	
10) If you roll a 5 or less, then you get 20 points If you roll a 6, then you lose 10 points	

Name: _____ 196

Curriculum Connection
C3.1

If Statements – Dice Game

The object of the game is to get as many points as you can. Follow the if/then statements and solve any equation from the list you are sent to. Cross out the equation once you have used it because you can only use each equation once. You earn the answer from the equation as points. Record your points in the column on the right.

Instructions Follow the if/then codes to solve equations and earn points

If/Then Code	Points
1) If you roll an e r, then solve an equation from list 1 If you roll a er, t olve an equation from list 2	
2) If you roll a 3 or , th uation from list 3 If you roll a 2 or less, e an from list 4	
3) If you roll a 6, then solve an quati If you roll a number other than 6, t ve an on from list 2	
4) If you roll an even number, then solve an n fro If you roll an odd number, then solve an eq fr	
5) If you roll a 1 or a 6, then solve an equation from If you roll a 2, 3, 4, or 5, then solve an equation from t	
6) If you roll a 2 or 5, then solve an equation from any list If you roll a 1, 3, 4, or 6, then solve an equation from list 2	
Total Points	

List 1	List 2	List 3	List 4	List 5	List 6
5 + 5	15 - 5	3 x 2	25 ÷ 5	12 + 12	3 x 3
12 + 6	14 - 6	7 x 5	30 ÷ 10	23 + 5	4 x 6
13 + 8	40 - 32	3 x 6	20 ÷ 4	15 + 13	7 x 3
21 + 13	32 - 21	4 x 5	12 ÷ 2	41 - 13	40 ÷ 4
14 + 22	45 - 15	9 x 4	15 ÷ 3	50 - 10	48 ÷ 8
30 + 20	50 – 21	6 x 6	36 ÷ 6	40 - 15	9 ÷ 3

Name: _____ 198

Curriculum Connection
C3.1

Coding – If/Else Statements

An **else** statement works like an if statement. When an if statement is false, we can have another command, instead of nothing happening.

Player 1 is not feeling well

IF they are coughing

THEN give them cough medicine

ELSE

Lay down and rest

Directions: Fill in the IF/ELSE commands below with your own ideas

My asthma is flaring up

IF I can't [illegible] well

ELSE

THEN

I feel warm and sick

If my temperature is above 38° C

ELSE

THEN

Coding - Thermostat

A **thermostat** is a computer that uses code to turn our heating and air conditioning on and off. Thermostats help us save energy! When a thermostat heats our house up to the right temperature, it turns off to save energy. When the house gets cold again, it turns back on.

An **HVAC technician** is an expert in the heating and cooling of buildings. They install thermostats, air conditioners, furnaces, and the ductwork that air travels through.

You can program your thermostat to different temperatures depending on when you are home. In the winter, you don't want to let your heat turn off completely because your pipes [illegible]ld freeze. Instead, you would turn the temperature down to above freezing, but not to[illegible]t you'll be wasting heat (around 16°C).

T[illegible]st[illegible] program uses coding to work. First, you need to define the time. Then [illegible] th[illegible]erature for that time. The backend of the c[illegible]ll look [illegible] like this:

define [illegible] [illegible]00:00 [illegible]0

set [time 1] [illegible]°C

Directions Help program Kyle's [illegible]ostat [illegible]ces you think are best for the winter

Cold - 18° C	W[illegible] - 22° C	Hot - 25° C

define [time1] as [00:00 – 07:0[illegible]]
set [time 1] to [______]

define [time2] as [07:01 – 08:30]
set [time 2] to [______]

define [time3] as [08:31 – 16:00]
set [time 3] to [______]

define [time4] as [16:01 – 22:00]
set [time 4] to [______]

define [time5] as [22:01 – 23:59]
set [time 5] to [______]

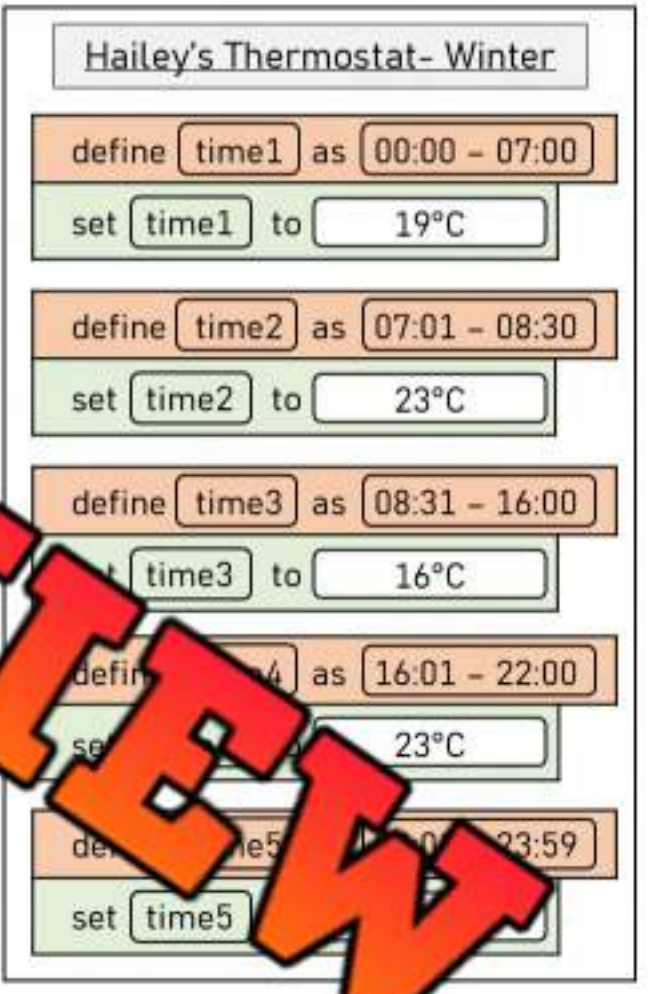
Name: _____ 208

Curriculum Connection
C3.1

Reading Code – Hailey's Thermostat

Directions Read Hailey's thermostat program and write what temperature it is based on the time

	Time	Temperature
1)	0 am	
2)		
3)	5:00 a	
4)	10:0	
5)	1:00 am	
6)	6:00 pm	
7)	2:30 pm	
8)	4:00 am	
9)	12:00 pm	
10)	8:31 am	



Results What do you think of Hailey's thermostat program? What would you change?

Name: _____ 209

Curriculum Connection
C3.1

Writing Code – My Thermostat

Directions Write your own thermostat program below to save energy

define time1 as

set time1 to

define

set to

define time3 as

set time3 to

define time4 as

set time4 to

define time5 as

set time5 to

define time6 as

set time6 to

Name: _____

Coding Quiz

Part 1 — Write the code below

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

Line 1: _____

Line 2: _____

Line 3: _____

Robot moved

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

Line 1: _____

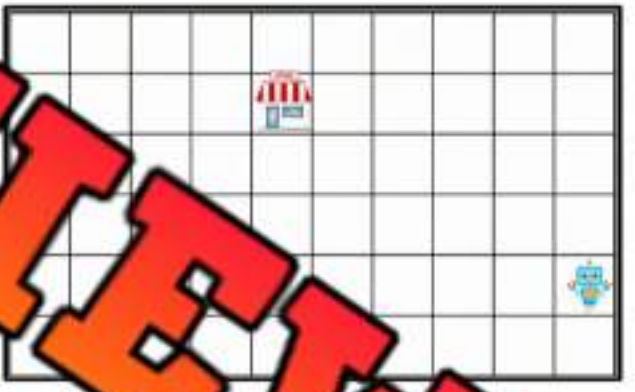
Line 2: _____

Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____



Robot moves

Part 2 — Put the scrambled code in the correct order by labeling steps 1-6

3. Go to school and then home

Code

_____ - go up 5

_____ - go down 4

_____ - enter school

_____ - go left 3

_____ - enter home

_____ - go right 2

Part 3 — Write code that sends the runner around the track

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

Line 1: _____

Line 2: _____

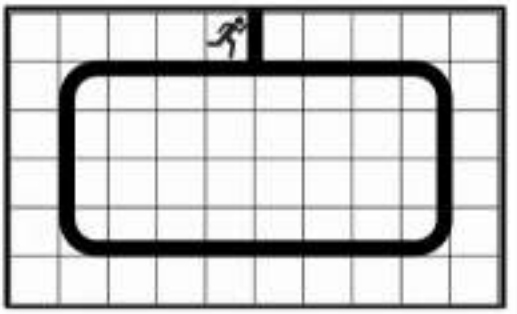
Line 3: _____

Line 4: _____

Line 5: _____

Line 6: _____

Line _____



Part 4 — Wri[illegible]hessa[illegible] code has programmed

5.

Code

```
Code1 = "DE"
Code2 = "TO"
Code3 = "I"
Code4= "CO"
print ("I love", Code2, Code4,Code1,Code3)
```

Computer Program:

_____ _____ _____ _____ _____

_____ _____

Part 5 — Calculate the answer to the question and then run t[illegible]

Code Written	The Computer Replied
If answer is >40, then print "Fantastic" If answer is >40, then print "Nice try!" Answer: run 92 – 50	
If student mark is >50/100, then print "You passed" If student mark is <50/100, then print "You failed" Student mark: run 49/100	