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Google Slides Lessons Preview





Alberta Math Curriculum Patterns & Algebra – Grade 3

3-Part Lesson Format

Part 1 – Minds On!

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

LEARNING GOAL

We are learning to find, create, and describe number patterns that increase or decrease so we can understand how numbers change on a hundreds chart.

Racetrack

Students look at a race and describe who is going to come 1st, 2nd, 3rd, 4th, and 5th. Drag the pictures and labels to answer.

Questions	Ordinal Number	Cars
Which car is in 1st place, right now?		
Which car is in 3rd place?		
Who is just after the red car?		
Which car is closest to the finish line?		

Part 2 – Action!

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

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Exit Card - Ordinal Numbers

Replace the 7th chair with the coloured chair.

Select the 3rd tapping for the ice cream. Drag the correct ordinal numbers to label the scoops.

Answer Bank
Fourth
Third
First
Fifth
Second



Alberta Math Curriculum Patterns & Algebra - Grade 3

Decreasing Pattern Rules - Subtracting To 100

Drag the numbers to create patterns according to the pattern rule.

#	PATTERN	RULE
1)		Start at 43, then subtract 3 each time
2)		Start at 68, then subtract 2 each time
3)		Start at 98, then subtract 10 each time
4)		Start at 91, then subtract 6 each time
5)		Start at 72, then subtract 4 each time

1 2 3 4 5 6 7 8 9 0

Table - Multiplication

Drag the numbers to fill in the tables. The first one is

Rule = Multiply by 0		Rule = Multiply by 2		Rule = Multiply by 10		Rule = Multiply by 3		Rule = Multiply by 5	
In	Out	In	Out	In	Out	In	Out	In	Out
16	0	5		1		0		3	
7	0	4		3		2		5	
9	0	7		8		6		2	
4	0	12		9		9		8	
22	0	20		110		11		10	

1 2 3 4 5 6 7 8 9 0

Drag the numbers to fill in the blanks after investigating the patterns between multiplication and division.

$6 \times \underline{\quad} = 6$	$12 \div \underline{\quad} = 6$
$\underline{\quad} \times 2 = 12$	$\underline{\quad} + 3 = 6$
$6 \times \underline{\quad} = 18$	$24 \div \underline{\quad} = 6$
$6 \times 4 = \underline{\quad}$	$30 \div 5 = \underline{\quad}$
$6 \times \underline{\quad} = 30$	$36 \div \underline{\quad} = 6$
$\underline{\quad} \times 6 = 36$	$\underline{\quad} - 7 = 6$
$6 \times \underline{\quad} = 42$	$48 \div \underline{\quad} = 6$
$6 \times 8 = \underline{\quad}$	$54 \div 9 = \underline{\quad}$
$6 \times \underline{\quad} = 54$	$60 \div \underline{\quad} = 6$
$\underline{\quad} \times 10 = 60$	

1 2 3 4 5 6 7 8 9 0



Alberta Math Curriculum Patterns & Algebra - Grade 3

Table of Values - Increasing/Decreasing Pattern

Drag the numbers to fill in the tables of values below and determine the increasing/decreasing pattern.

Term Number	Term Value
1	79
2	89
3	99
4	
5	
6	

1 2 3 4 5 6 7 8 9 0

Term Number	Term Value
1	106
2	100
3	94
4	
5	
6	

1 2 3 4 5 6 7 8 9 0

Pre-Algebra - Balance

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

Drag the numbers to show how many balls are needed to balance the scales?

1) $4 + \underline{\quad} = 11$	2) $2 + \underline{\quad} = 10$	3) $7 + \underline{\quad} = 15$	4) $0 + \underline{\quad} = 5$
5) $3 + \underline{\quad} = 9$	6) $1 + \underline{\quad} = 5$	7) $8 + \underline{\quad} = 10$	8) $6 + \underline{\quad} = 6$

1 2 3 4 5 6 7 8 9 0

Pre-Algebra - Balance

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

Drag the numbers to show how many balls you need to take away to balance the scales.

1) $8 - \underline{\quad} = 2$	2) $13 - \underline{\quad} = 9$	3) $7 - \underline{\quad} = 5$	4) $10 - \underline{\quad} = 0$
5) $12 - \underline{\quad} = 1$	6) $4 - \underline{\quad} = 2$	7) $9 - \underline{\quad} = 6$	8) $15 - \underline{\quad} = 8$

1 2 3 4 5 6 7 8 9 0



Workbook Preview





Grade 3 Patterns and Algebra



	Curriculum Expectations	Pages
	<p><u>Students analyze patterns in numerical sequences.</u></p> <ul style="list-style-type: none">▪ Recognize familiar numerical sequences, including the sequence of even or odd numbers.▪ Describe position in a sequence using ordinal numbers.▪ Differentiate between finite and infinite sequences.	
P.1	<p>Recognize skip-counting sequences in various</p>	5-79
<p>Preview of 100 pages from this product that contains 270 pages total.</p>		
A.1	<p><u>Students illustrate equality with equations.</u></p> <ul style="list-style-type: none">▪ Write equations that represent equality between a number and an expression or between two different expressions of the same number.▪ Model equations that include an unknown value, including with a balance.▪ Determine an unknown value on the left or right side of an equation, limited to equations with one operation.▪ Solve problems using equations, limited to equations with one operation.	83-141
TQ	Tests and Quizzes	80-81, 142-143

Name: _____

6

Hundreds Chart Patterns

Questions

Fill in the missing numbers

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

Directions

Follow the instructions below

1) Colour the odd numbers



2) Colour the even numbers



Hundreds Chart Patterns

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

Directions

Follow the instructions below

A number pattern needs to have a rule that the pattern follows. Colour the numbers in the hundreds chart that show the pattern rule

Rule: start at 5, add 5 each time

Hundreds Chart Patterns

Directions

Follow the instructions below

Colour the pattern rule: start at 3, add 3 each time

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

Colour the pattern rule: start at 1, add 1 each time

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

Name: _____

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Curriculum Connection
P.1

Hundreds Chart Patterns

Directions

Create your own patterns on the hundreds chart. Write the rule

Pattern Rule:






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

Pattern Rule:

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

Increasing Pattern – Numbers to 100**Questions**

Fill in the blanks below

1.  1 7 13 19 _____
2.  23 27 35 _____
3.  42 50 58 66 _____
4.  66 71 76 81 _____
5.  76 79 82 85 _____

Increasing Pattern – Numbers to 1000**Questions**

Fill in the blanks below

1.



104

112

120

128

2.



24

255

261

3.



406

420

448

4.



686

706

726

746

5.



815

831

847

863

Introduction To Ordinal Numbers

Matching

Match the ordinal numbers

Fourth

2nd

Second

5th

Third

9th

Eighth

3rd

First

8th

Seventh

1st

Ninth

4th

Third

6th

Fifth

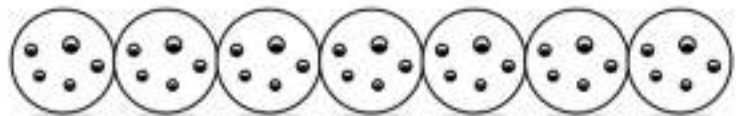
7th

First

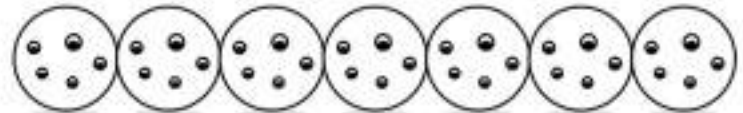
Directions

Shade in the correct cookie using any colour or your fingers

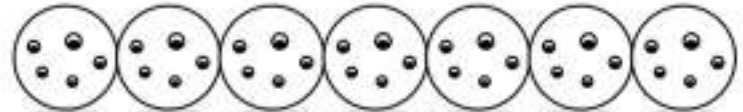
1) Shade in the fifth cookie



2) Shade in the seventh cookie



3) Shade in the second cookie



Ordinal Numbers – The Big Race



Rabbit



Elephant



Cat



Dog



Deer










Lion



Cheetah



Part 1 What place did each animal get - 1st, 2nd, 3rd, 4th, 5th, 6th, 7th

Animal							
Place							

Part 2 What place did each animal get - Fill in the blanks

Word Bank: First, Second, Third, Fourth, Fifth, Sixth, Seventh

- 1) The cat was in _____ place.
- 2) The lion was in _____ place.
- 3) The deer was in _____ place.
- 4) The elephant was in _____ place.
- 5) The rabbit was in _____ place.
- 6) The dog was in _____ place.
- 7) The cheetah was in _____ place.

Ordinal Numbers – Ice Cream Scoops**Questions**

Colour the scoops of ice cream starting at the bottom

- 1) Colour the fifth scoop blue
- 2) Colour the second scoop green
- 3) Colour the third scoop purple
- 4) Colour the first scoop yellow
- 5) Colour the eighth scoop pink
- 6) Colour the fourth scoop orange
- 7) Colour the tenth scoop red
- 8) Colour the sixth scoop black
- 9) Colour the ninth scoop grey
- 10) Leave the seventh scoop white



Finite vs Infinite Patterns

A **finite pattern** will end with the last number. A finite pattern has a last term. An **infinite pattern** has no ending and will continue forever or until an ending has been chosen. An infinite pattern has no last term. We use ... to show that the pattern continues.

Examples

Finite Pattern Countdown to the new year: 10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0

Infinite Pattern Money made at a job: 20, 40, 60, 80, 100, 120, 140...

Questions: Complete the pattern. Is it a finite or infinite pattern?

	Pattern	Pattern Type	
		Finite	Infinite
1)	1, 3, 5, 7, 9, <input type="text"/> , 13, <input type="text"/> , 19...	Finite	Infinite
2)	25, 21, 17, 13, <input type="text"/> , 5, <input type="text"/>	Finite	Infinite
3)	5, 15, 25, <input type="text"/> , 45, 55, <input type="text"/> , 75...		Infinite
4)	8, 15, 22, <input type="text"/> , 36, 43, <input type="text"/> , 57	Finite	Infinite
5)	150, 125, <input type="text"/> , 75, 50, 25, <input type="text"/>	Finite	Infinite
6)	50, 100, <input type="text"/> , 200, 250, <input type="text"/> , 350...	Finite	Infinite

Growing Patterns - Addition

Growing/Increasing Patterns

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

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



Part 1 Growing Patterns - Addition

1) \wedge \wedge
 2, 4, 6, _____

2) \wedge \wedge
 6, 10, 14, _____, _____, _____

3) \wedge \wedge \wedge \wedge
 10, 15, 20, _____, _____, _____, 25, _____, 5, 258, _____, _____, _____

5) \wedge \wedge
 702, 708, 714, _____, _____, _____

6) \wedge
 8, _____, _____, _____

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

1) (Add 2)

7, 9, 11, _____, _____, _____

2) (Add 3)

22, 25, 28, _____, _____, _____

3) (Add 6)

32, 38, 44, _____, _____, _____

4) (Add 5)

115, 120, 125, _____, _____, _____

5) (Add 10)

604, 614, 624, _____, _____, _____

6) (Add 4)

942, 946, 950, _____, _____, _____

Increasing Patterns Rules – Adding To 100**Questions**

Fill in the blanks by figuring out the pattern rules

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

Start at _____, then add _____ each time

8, 53, 58, 63, 68, 73

Start at _____, then add _____ each time

21, 31, 41, 51, 61, 71, 81

Start at _____, then add _____ each time

37, 43, 49, 55, 61, 67, 73

Start at _____, then add _____ each time

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

Start at _____, then add _____ each time

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

Start at _____, then add _____ each time

Using Pattern Rules – Adding To 1000

Questions

Write your own patterns using the pattern rule

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

Pattern Rule: Start at 215, add 10 each time

2) _____, _____, _____, _____, _____

Pattern Rule: Start at _____, add 6 each time

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 521, add _____ each time

4) _____, _____, _____, _____, _____

Pattern Rule: Start at 675, add 7 each time

5) _____, _____, _____, _____, _____

Pattern Rule: Start at 808, add 3 each time

Pattern Rule – Addition

Part 1

Continue the growing/increasing patterns below

1) 10, 20, 30, _____, _____, _____

Pattern Rule: Start at 10, add _____ each time

2) 2, 5, 8, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

3) 35, 55, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

4) 150, 160, 170, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

5) 673, 677, 681, _____, _____, _____

Pattern Rule: Start at _____ add _____ each time

Part 2

Write your own patterns using the pattern rule

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

Pattern Rule: Start at 20, add 5 each time

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

Pattern Rule: Start at 110, add 7 each time

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

Pattern Rule: Start at 27, add 5 each time

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

Pattern Rule: Start at 546, add 4 each time



Input/Output Table – Pattern Rules



Rule: add 5	
In	Out
3	8
16	21
23	28
42	47



Question: Complete the input/output tables below

In	Out
15	
20	
27	
32	

Rule: add 2	
In	Out
5	
14	
27	
3	

Rule: add 4	
In	Out
41	
53	
67	
78	

Rule: add 2	
In	Out
71	
79	
84	
91	

Rule: add 5	
In	Out
50	
65	
80	
95	

Rule: add 10	
In	Out
29	
41	
58	
72	

Patterning Word Problem - Earnings

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Luna worked a week for 6 days. The first day she made \$25 and at the end of the second day, she had \$50. After the third day she had \$75.

a) How much did she make each day for the 6 days of work?

b) How much did she make each day?



Patterning Word Problem – Growing Hair

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Avery's hair was 150mm long in January. In February, her hair was 162mm long. In March, her hair was 174mm long.

a) How long will her hair be in April if the pattern continues?

b) How long will her hair be in July?



Patterning Word Problem - Snowfall

Questions

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

The snow fell outside Aidan's house. He records the height of the snow each hour. After the 1st hour, it was 200mm. After the 2nd hour, it was 250mm. After the 3rd hour it was 320mm.

- a) What will the height of the snow be after the 4th hour?



- b) What will the height of the snow be after the 7th hour?

Shrinking Patterns - Subtraction

Shrinking/Decreasing Patterns

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

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



Part 1

Fill in the missing numbers in the pattern

\wedge \wedge 1) 12, 10, 8, _____	\wedge \wedge 2) 23, 19, 15, _____, _____, _____
\wedge \wedge 3) 32, 26, 20, _____, _____, _____	\wedge \wedge 4) 175, 155, _____, _____, _____
\wedge \wedge 5) 156, 148, 140, _____, _____, _____	\wedge \wedge 6) _____, _____, _____, _____, _____

Part 2

Follow the rule by adding the next number in the

1) (Subtract 2) 18, 16, 14, _____, _____, _____	2) (Subtract 3) 30, 27, 24, _____, _____, _____
3) (Subtract 5) 38, 33, 28, _____, _____, _____	4) (Subtract 100) 600, 500, 400, _____, _____, _____
5) (Subtract 6) 862, 856, 850, _____, _____, _____	6) (Subtract 4) 378, 374, 370, _____, _____, _____

Decreasing Patterns Rules – Subtracting (1)**Questions**

Fill in the blanks by figuring out the pattern rules

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

Start at _____, then subtract _____ each time

59, 34, 29, 24, 19, 14

Start at _____, then subtract _____ each time

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

Start at _____, then subtract _____ each time

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

Start at _____, then subtract _____ each time

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

Start at _____, then subtract _____ each time

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

Start at _____, then subtract _____ each time

Using Pattern Rules – Subtraction (2)

Questions

Write your own patterns using the pattern rule

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

Pattern Rule: Start at 283, subtract 10 each time

2) _____, _____, _____, _____, _____

Pattern Rule: Start at _____, subtract 6 each time

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 541, subtract _____ each time

4) _____, _____, _____, _____, _____

Pattern Rule: Start at 758, subtract 7 each time

5) _____, _____, _____, _____, _____

Pattern Rule: Start at 935, subtract 3 each time

Pattern Rule - Subtraction

Part 1

Continue the shrinking/decreasing patterns below

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

Pattern Rule: Start at 12, subtract _____ each time

2) 22, 19, _____, _____, _____

Pattern Rule: Start at _____ subtract _____ each time

3) 14, 10, 13, _____, _____, _____

Pattern Rule: Start at _____ subtract _____ each time

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

Pattern Rule: Start at _____ subtract _____ each time

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

Pattern Rule: Start at _____ subtract _____ each time

Part 2

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____

Pattern Rule: Start at 50, subtract 0 each time

2) _____, _____, _____, _____, _____

Pattern Rule: Start at 236, subtract 6 each time

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 794, subtract 5 each time

4) _____, _____, _____, _____, _____

Pattern Rule: Start at 142, subtract 4 each time

Input/Output Table – Subtraction



Rule: subtract 3	
In	Out
48	45
61	58
71	68
85	82



Question: Complete the input/output tables below

Rule: subtract 2	
In	Out
35	
45	
53	
66	

Rule: subtract 4	
In	Out
26	
38	
45	

Rule: subtract 3	
In	Out
12	
19	
26	
34	

Rule: subtract 5	
In	Out
55	
64	
71	
77	

Rule: subtract 7	
In	Out
61	
70	
79	
88	

Rule: subtract 8	
In	Out
63	
77	
86	
95	

Patterning Subtraction Word Problems – Spending**Questions**

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Henry buys the same lunch every day for one week. After his first lunch, he has \$200. After his second lunch, he has \$172. After his third lunch, he has \$144.

a) How much money does Henry have left after his fourth lunch?



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



c) How much does each lunch cost?

Patterning Subtraction Word Problems – Running**Questions**

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

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

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

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

c) How many km is a half marathon?

Activity Title: Pattern Treasure Hunt

Objective

What are we learning about?

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

Materials

What you will need for the activity.

- Stopwatch or timer (or use a smartphone)
- Index cards
- Markers
- Small prizes or rewards (optional)
- Tape



Instructions

How you will complete the activity.

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

Instructions

Cut out the cards below

1) 3, 6, 9,
_____2) 10, 20, 30,
_____3) (Add 5) 5, 10, 15,
_____4) (Add 4) 28, 32, 36,
_____5) 100, 90, 80,
_____6) 100, 90, 80,
_____7) Pattern Rule: Start at 5, add
5 each time. 5, 10, 15,
_____8) Pattern Rule: Start at 200,
subtract 10 each time.
200, 190, 180,
_____**PREVIEW**

Instructions

Cut out the cards below

9) A printer uses 10 pages of paper less each day due to conservation efforts. If it used 100 pages on Monday, how many pages will it use on Thursday?

10) A bakery makes 200 cupcakes, and each day they make 50 more than the previous day. How many cupcakes do they make on the fourth day?

11) (Add 10) 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100

12) (Subtract 5) 55, 50, 45, 40, 35, 30, 25, 20, 15, 10, 5, 0

13) Emma saves \$2 every day. How much will she have after 10 days if she starts with \$5?

14) If a car decreases its speed by 10 km/h every hour from 100 km/h, what is its speed after 3 hours?

15) 12, 24, 36, 48, 60, 72, 84, 96, 108, 120

16) 300, 600, 900, 1200, 1500, 1800, 2100, 2400, 2700, 3000

Instructions

Cut out the cards below

25) Leah had \$50. She earns \$10 more each day. How much money will Leah have after 7 days?

26) Pattern Rule: Subtract 2 starting from 18.

_____, _____, _____

27) Sara planted 6 trees. Each year, the number of trees doubles. How many trees will there be in 3 years?

28) (Add 15) 30, 45, 60,

_____, _____, _____

29) Jake starts with 150 candies and eats 10 each day. How many candies are left after 8 days?

30) Ava starts at 10 and triples her score in each game. What will she have in the 3rd round?

31) Claire collects shells on the beach, doubling her total each day. If she starts with 6 shells on Monday, how many will she have by Wednesday?

32) A garden was planted with 50 flowers. Each day, 5 new flowers bloom. How many flowers will be in the garden after one week?

Input/Output Table - Multiplication



Rule: multiply by 2

In	Out
1	2
3	6
5	10
7	14

Questions: Complete the input/output tables below

Rule: multiply by 2

In	Out
2	
5	
10	
20	

Rule: multiply by 6

In	Out
2	
4	
6	
8	
10	

Rule: multiply by 4

In	Out
2	
4	
6	
8	

Rule: multiply by 3

In	Out
3	
6	
9	
10	

Rule: multiply by 5

In	Out
1	
3	
5	
7	

Rule: multiply by 10

In	Out
2	
5	
8	
10	

Name: _____

58

Activity: Finger Signals Quiz - Doubling Patterns

Objective

What are we learning about?

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

Materials

What you will need for the activity.

- A list of questions



Instructions

How you will complete the activity

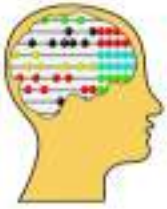
1. Prepare a list of questions with answer choices labeled A, B, C, and D.
2. Explain the finger signals for each answer choice: one finger for A, two fingers for B, three fingers for C, and four fingers for D.
3. Inform the students they will show their answer by raising the appropriate number of fingers 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: _____

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

Growing Patterns



Growing/Increasing Patterns

Addition

$$+2 \quad +2 \quad +2 \quad +2$$



$$2, 4, 6, 8, 10$$

Multiplication

$$\times 2 \quad \times 2 \quad \times 2 \quad \times 2$$



$$2, 4, 8, 16, 32$$



Part 1

Growing Patterns - Addition

$$\wedge$$

1) 5, 10, 15, _____, _____, _____

4) 10, 20, 30, _____, _____, _____

$$\begin{array}{c} + \quad + \\ \wedge \quad \wedge \end{array}$$

2) 3, 6, 9, _____, _____, _____

5) 100, 300, _____, _____, _____

$$\begin{array}{c} + \quad + \\ \wedge \quad \wedge \end{array}$$

3) 2, 4, 6, _____, _____, _____

6) 4, 10, 5, _____, _____, _____

Part 2

Growing Patterns - Multiplication

$$\begin{array}{c} \times \quad \times \\ \wedge \quad \wedge \end{array}$$

1) 5, 10, 20, _____, _____, _____

4) 10, 20, 40, _____, _____, _____

$$\wedge \quad \wedge$$

2) 2, 4, 8, _____, _____, _____

5) 100, 200, 400, _____, _____, _____

$$\wedge \quad \wedge$$

3) 1, 3, 9, _____, _____, _____

6) 1, 5, 25, _____, _____, _____

Patterning Multiplication Word Problems – Reading**Questions**

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Daniel read 1 page from his book on day one, 2 pages of his book on day two, 4 pages of his book on day three, and 8 pages of his book on day four.

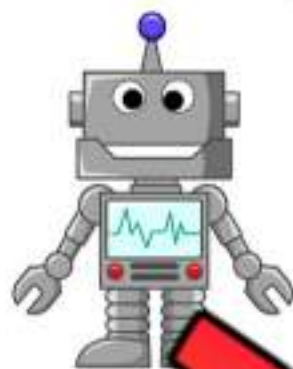
a) How many pages did he read on day 5?

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

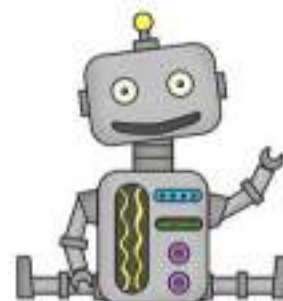
c) What is the pattern rule?



Input/Output Table – Division



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



Question: Complete the input/output tables below

Rule: divide by 1	
In	Out
1	
5	
10	
20	

Rule: divide by 2	
In	Out
6	
10	
4	
2	

Rule: divide by 3	
In	Out
6	
9	
12	
15	

Rule: divide by 4	
In	Out
4	
8	
16	
32	

Rule: divide by 5	
In	Out
10	
20	
40	
50	

Rule: divide by 10	
In	Out
10	
20	
50	
100	

Pattern Rule - Division

Part 1

Continue the shrinking/decreasing patterns below

1) 120, 60, 30, _____

Pattern Rule: Start at 120, divide by 2 each time

2) 10, 1 _____, _____, _____

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

3) 243, 81, 27, _____

Pattern Rule: Start at _____, divide by _____ each time

4) 256, 64, 16, _____

Pattern Rule: Start at _____, divide by _____ each time

Part 2

Write your own patterns using the same rule

1) _____, _____, _____, _____

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

2) _____, _____, _____, _____

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

3) _____, _____, _____, _____

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

4) _____, _____, _____, _____

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

Shrinking / Decreasing Patterns

Shrinking/Decreasing Patterns

Subtraction

-3 -3 -3 -3
 \wedge \wedge \wedge \wedge
 20, 17, 14, 11, 8

Division

+2 +2 +2
 \wedge \wedge \wedge
 80, 40, 20, 10

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

Part 1 Shrinking Patterns - Subtraction

1) 10, 8, 6, _____

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

2) 20, 17, 14, _____, _____

145, 140, _____, _____, _____

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

129 _____, _____

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

8) 158, 152, 146, _____, _____, _____

Part 2 Shrinking Patterns - Division

+2 +2 +2

 \wedge \wedge \wedge

1) 120, 60, 30, _____

÷3 ÷3 ÷3

 \wedge \wedge \wedge

3) 162, 54, 18, _____, _____

+2 +2 +2

 \wedge \wedge \wedge

2) 800, 400, 200, _____, _____

÷2 ÷2 ÷2

 \wedge \wedge \wedge

4) 160, 80, 40, _____, _____

Patterning Division Word Problems – Melting**Questions**

Follow the problem-solving steps below

- | | | |
|---|--|--|
| <input type="checkbox"/> Read the problem carefully | <input type="checkbox"/> Underline important information | <input type="checkbox"/> Draw pictures |
| <input type="checkbox"/> Write a number sentence | <input type="checkbox"/> Solve the problem | <input type="checkbox"/> Check your answer |

Lincoln tracked the amount of snow in his backyard. After a heavy snow there were 400mm of snow. On day 2, there was 320mm of snow. On day 3, there was 240mm of snow. On day 4, there was 160mm of snow. On day 5, there was 80mm of snow.

a) If the pattern continues, how much snow will be left on day 5?

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

c) What is the pattern rule?



Pattern Rule – Input/Output Tables



Questions

Fill in the input/output tables below

Rule: Subtract 8	
In	Out
14	
2	
	58

Rule: Add 13	
In	Out
15	
20	
	62
	138

Rule: Add 1	
In	Out
41	
87	
	121
	177

Rule: Multiply by 2	
In	Out
10	
20	
	80
	140

Rule: Divide by 2	
In	Out
20	
48	
	31
	42

Rule: Multiply by 5	
In	Out
10	
20	
	5
	7

Rule: Multiply by 3	
In	Out
4	
10	
	15
	30

Rule: Divide by 3	
In	Out
15	
24	
	10
	15

Exit Cards

Cut Out

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

Name: _____

Fill in the input/output tables below

Rule: multiply by 3		Rule: divide by 4	
In	Out	In	Out
15		20	
25			12
	120		
	180		

Name: _____

Fill in the input/output tables below

Rule: multiply by 3		Rule: divide by 4	
In	Out	In	Out
15		8	
25		20	
	120		8
	180		12

Name: _____

Fill in the input/output tables below

Rule: multiply by 3		Rule: divide by 4	
In	Out	In	Out
15		8	
25		20	
	120		8
	180		12

Name: _____

Fill in the input/output tables below

Rule: multiply by 3		Rule: divide by 4	
In	Out	In	Out
15		8	
25		20	
	120		8
	180		12

T-Tables – Finding Patterns

Questions

Fill in the T-Tables by counting the blocks








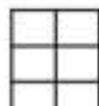


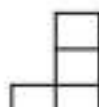
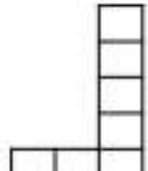

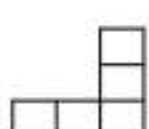

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3											
4											
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4											

Table of Values

Questions

Answer the questions below by using the table of values

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



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

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

Hours Worked	Money Made
1	
2	
3	
4	
5	
10	

Kids	Slices of Pizza
1	
2	
3	
4	
5	
10	

You are having a birthday party for your family. You expect 5 kids coming to the party. Each kid will eat 2 slices of pizza.



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

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

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



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

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

Games	Total Points Scored
1	
2	
3	
4	
5	
8	

Multiplication Chart - Patterns

Instructions

Fill in the multiplication table below



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

PREVIEW

Name: _____

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Curriculum Connection
P.1

Multiplication Chart - Patterns



Questions

Fill in the multiplication table below

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

PREVIEW

Multiplication Chart - Patterns

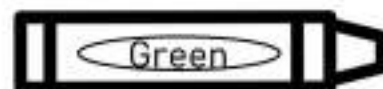
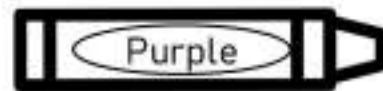
x	1	2	3	4	5	6	7	8	9	10
1	1	2	3	4	5	6	7	8	9	10
2	2	4	6	8	10	12	14	16	18	20
3	3	6	9	12	15	18	21	24	27	30
4	4	8	12	16	20	24	28	32	36	40
5	5	10	15	20	25	30	35	40	45	50
6	6	12	18	24	30	36	42	48	54	60
7	7	14	21	28	35	42	49	56	63	70
8	8	16	24	32	40	48	56	64	72	80
9	9	18	27	36	45	54	63	72	81	90
10	10	20	30	40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

PREVIEW

Questions

Follow the instructions below

1. Count by 2's and colour the numbers
2. Count by 3's and colour the numbers
3. Count by 5's and colour the numbers
4. Count by 10's and colour the numbers



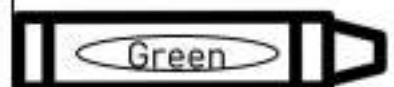
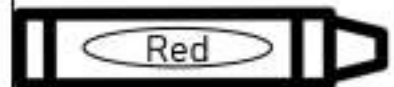
Multiplication Chart - Patterns

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

Questions

Answer the questions and colour the chart based on answers

3×2	5×5	5×6	7×2
10×5	6×2	5×2	9×6
4×10	10×9	8×3	4×8
4×7	9×3	7×5	7×9



Patterning Quiz

Part 1

Fill in the input/output tables below

Rule: add 5	
In	Out
7	
16	
	28
	11

Rule: subtract 3	
In	Out
12	
	16
	23
47	

Rule: multiply by 6	
In	Out
	0
4	
	42
9	

Rule: divide by 4	
In	Out
20	
	7
3	
	10

Part 2

Follow the rule to extend the growing/shrinking patterns

1) (Add 5) 13, 18, 23, _____, _____, _____	2) (Add 7) 23, 30, 37, _____, _____, _____
3) (Subtract 6) 57, 51, 45, _____, _____, _____	4) (subtract 12) 82, 70, 58, _____, _____, _____
5) (Multiply by 2) 3, 6, 12, _____, _____, _____	6) (Divide by 2) 160, 80, 40, _____, _____, _____

Part 3

Follow the rule to extend the growing and shrinking patterns

1) (Add 5)

3, 8, 13, _____, _____, _____

2) (Add 3)

123, 126, 129, _____, _____, _____

3) (Add 6)

302, 308, _____, _____, _____

4) (subtract 2)

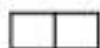
18, 16, 14, _____, _____, _____

5) (subtract 10)

660, 650, 640, _____, _____, _____

6) (subtract 4)

546, 542, 538, _____, _____, _____



7) Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Part 4

Solve the word problem below

Luca buys a coffee each day before work. On day one, he has \$220. On day two, he had \$214. On day 3, he had \$208.

a) How much money will he have on day 4?

b) How much money will he have on day 7?

c) What is the pattern rule?



Grade 3 Algebra



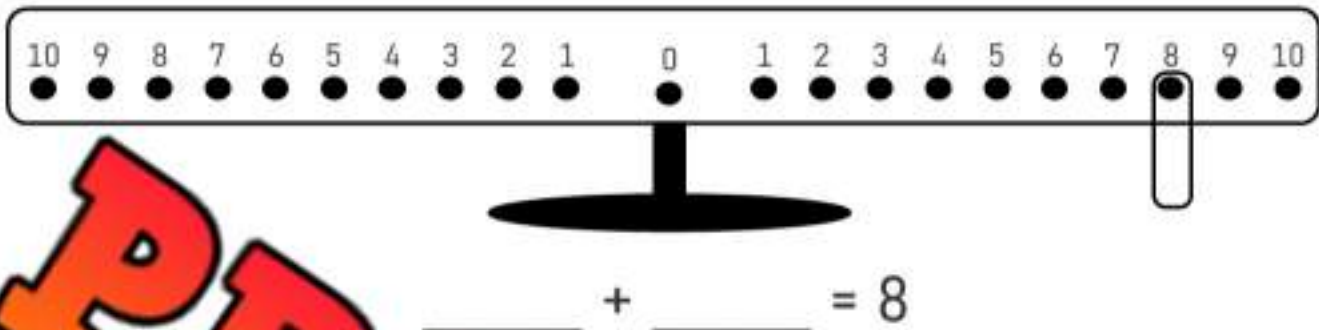
	Curriculum Expectations	Pages
A.1	<p>Students illustrate equality with equations.</p> <ul style="list-style-type: none">▪ Write equations that represent equality between a number and an expression or between two different expressions of the same number.▪ Model equations that include an unknown value, including with a balance.▪ Determine an unknown value on the left or right side of an equation, limited to equations with one operation.▪ Solve problems using equations, limited to equations with one operation.	83-141
TQ	Tests and Quizzes	142-143

Balance Pan Equations

Questions

How many ways can you balance the equation to equal 8

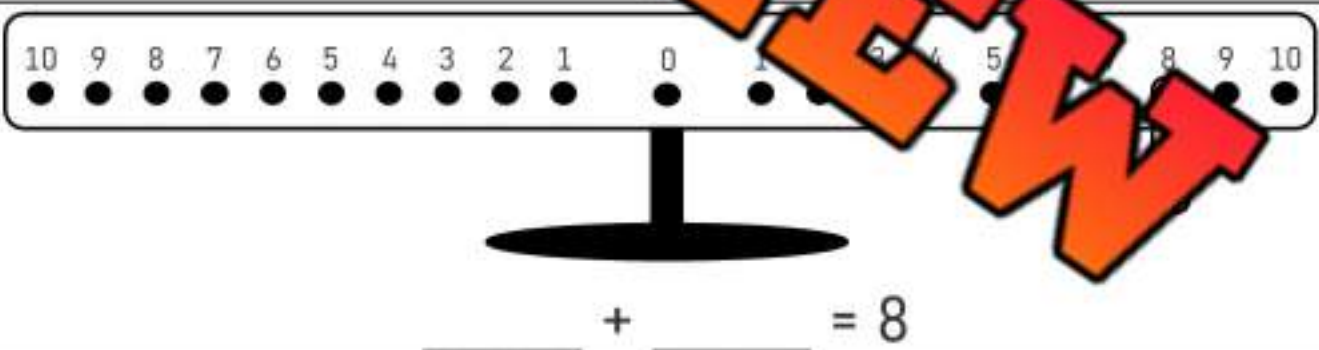
1)



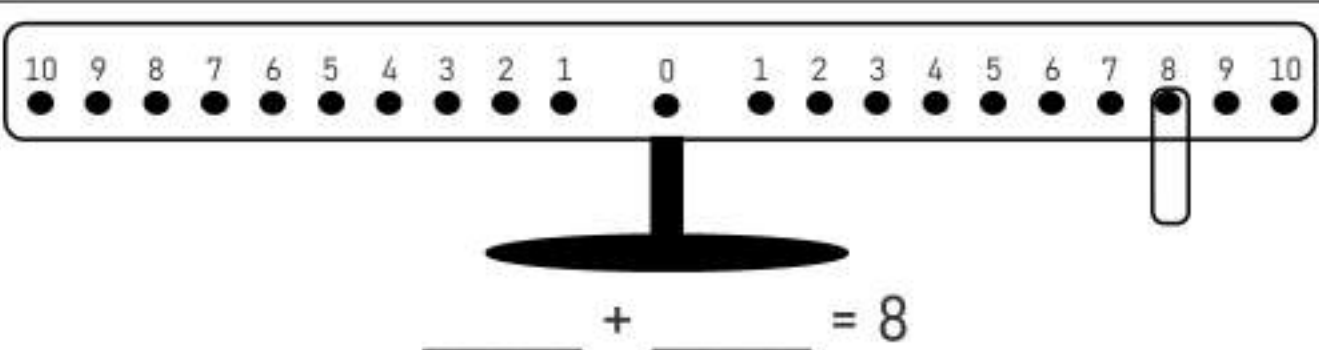
2)



3)



4)

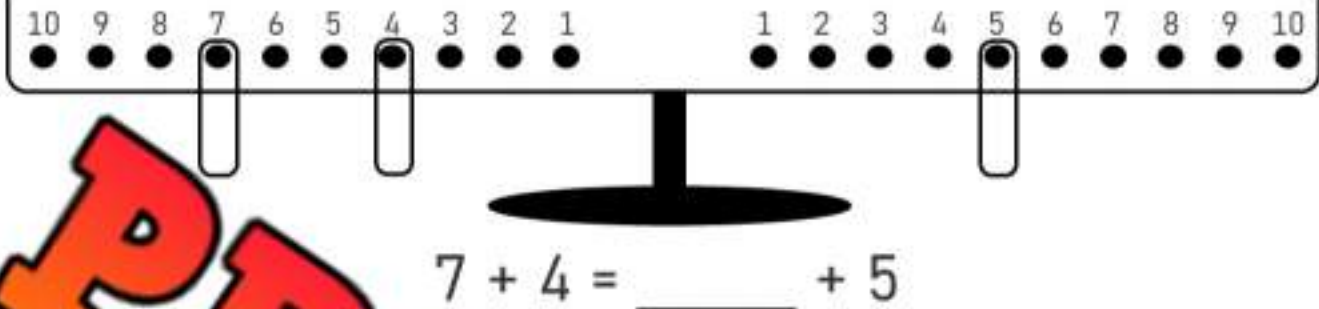


Balance Pan Equations

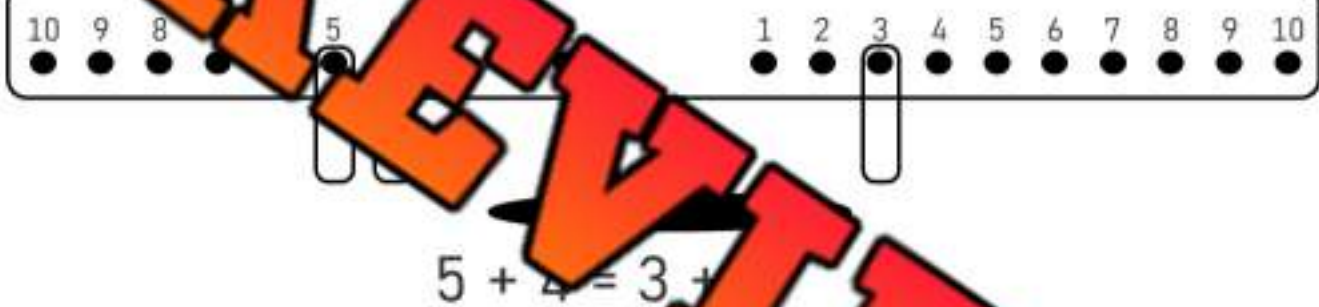
Questions

Balance the equations below

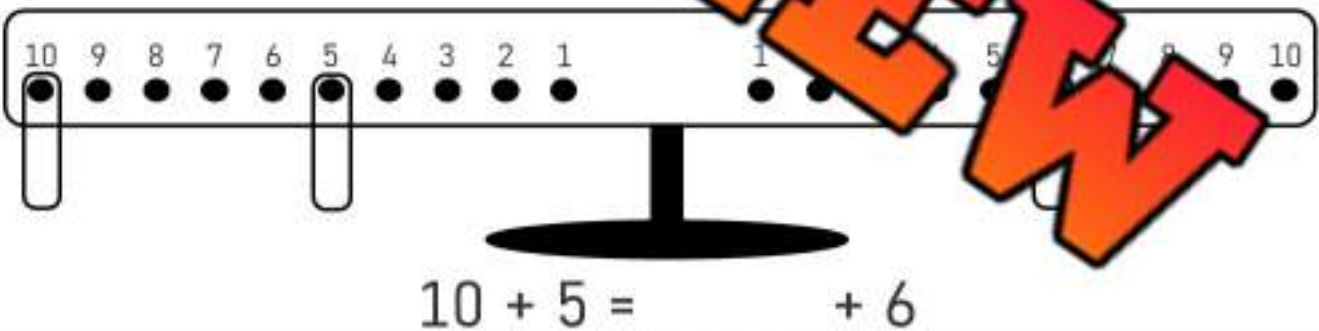
1)



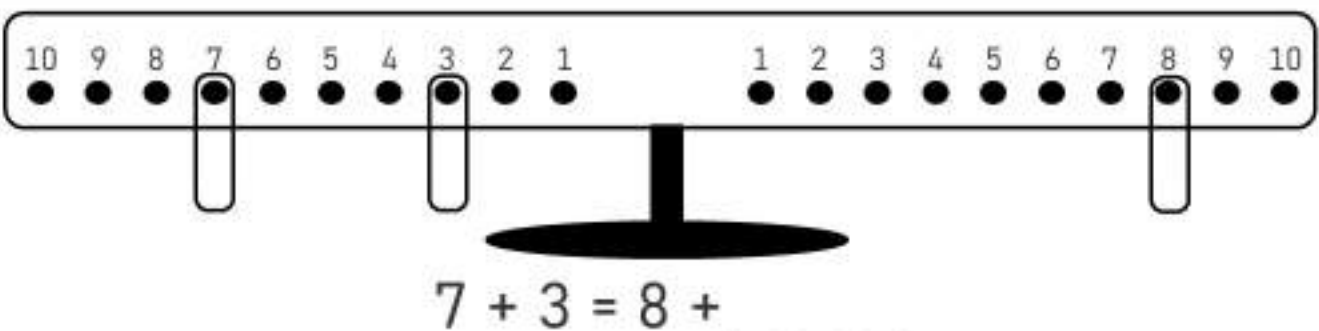
2)



3)



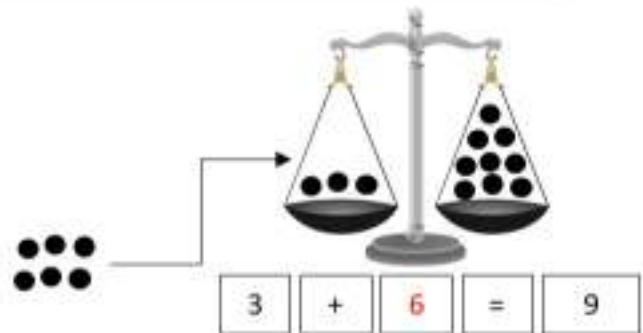
4)



Pre-Algebra – Balancing Addition Equations

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

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



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



$$7 + \square = 11$$



$$5 + \square = 10$$



$$6 + \square = 14$$



$$6 + \square = 8$$



$$6 + \square = 13$$



$$2 + \square = 12$$



$$4 + \square = 10$$



$$3 + \square = 14$$



$$1 + \square = 12$$

Addition to 100 – Are They Equal?

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

$15 + 7 = 22$

$28 + 4 \neq 33$

$44 + 6 = 50$



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

$1) 15 + 5 = 20$

$2) 17 + 4 = 21$

$3) 23 + 7 = 29$

$4) 21 + 6 = 27$

$5) 18 + 5 = 23$

$6) 23 + 10 = 33$

$7) 19 + 6 = 26$

$8) 26 + 5 = 31$

$9) 39 + 7 = 46$

$10) 58 + 6 = 66$

$11) 61 + 5 = 66$

$12) 78 + 12 = 90$

$13) 60 + 10 = 70$

$14) 81 + 0 = 81$

$15) 84 + 3 = 88$

$16) 90 + 7 = 96$

$17) 94 + 5 = 99$

$18) 87 + 10 = 97$

Pre-Algebra – Result Unknown

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

Examples:

$$\begin{array}{c} 10 \\ \wedge \\ 3 + 7 = 10 \end{array}$$

$$\begin{array}{c} 30 \\ \wedge \\ 24 + 6 = 30 \end{array}$$

Questions Fill in the missing number to balance the equation

1) $15 + 8 =$ _____

2) $23 + 6 =$ _____

3) $7 + 6 =$ _____

4) $7 =$ _____

5) $18 + 6 =$ _____

6) $6 + 1 =$ _____

7) $36 + 12 =$ _____

8) $41 + 9 =$ _____

9) $63 + 13 =$ _____

10) $78 + 13 =$ _____

11) $88 + 14 =$ _____

12) $108 + 7 =$ _____

13) $136 + 12 =$ _____

14) $145 + 15 =$ _____

Pre-Algebra – Change Unknown

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

Examples:

$$\begin{array}{c} 10 \\ \wedge \\ 3 + 7 = 10 \end{array}$$

$$\begin{array}{c} 30 \\ \wedge \\ 22 + 8 = 30 \end{array}$$

Questions

Fill in the missing number to balance the equation

1) $5 + \underline{\quad} = \quad$

2) $3 + \underline{\quad} = 7$

3) $7 + \underline{\quad} = 14$

5) $12 + \underline{\quad} = 17$

6) $\underline{\quad} + \underline{\quad} = 22$

7) $18 + \underline{\quad} = 25$

8) $15 + \underline{\quad} = \quad$

9) $13 + \underline{\quad} = 18$

10) $17 + \underline{\quad} = 24$

11) $25 + \underline{\quad} = 32$

12) $31 + \underline{\quad} = 38$

13) $44 + \underline{\quad} = 51$

14) $53 + \underline{\quad} = 62$

Pre-Algebra – Start Unknown

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

Examples:

$$\begin{array}{c} 17 \\ \wedge \\ 10 + 7 = 17 \end{array}$$

$$\begin{array}{c} 30 \\ \wedge \\ 7 + 23 = 30 \end{array}$$

Questions

Fill in the missing number to balance the equation

1) _____ = _____

2) _____ + 2 = 8

3) _____ + 6 = _____

_____ + 5 = 7

5) _____ + 9 = 13

6) _____ + _____ = 13

7) _____ + 7 = 15

8) _____ + _____ = _____

9) _____ + 6 = 24

10) _____ + 5 = 28

11) _____ + 5 = 25

12) _____ + 7 = 32

13) _____ + 11 = 43

14) _____ + 13 = 48

Exit Cards

Cut Out

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

Name: _____

Fill in the missing number to balance the equation

- a) _____
- b) $38 + 21 = \underline{\hspace{1cm}} + 11$
- c) $45 + \underline{\hspace{1cm}} = 67$
- d) $\underline{\hspace{1cm}} + 4 = 35 + 20$

Name: _____

Fill in the missing number to balance the equation

- a) $14 + 26 = \underline{\hspace{1cm}}$
- b) $38 + 21 = \underline{\hspace{1cm}} + 11$
- c) $45 + \underline{\hspace{1cm}} = 67$
- d) $\underline{\hspace{1cm}} + 4 = 35 + 20$

Name: _____

Fill in the missing number to balance the equation

- a) $14 + 26 = \underline{\hspace{1cm}}$
- b) $38 + 21 = \underline{\hspace{1cm}} + 11$
- c) $45 + \underline{\hspace{1cm}} = 67$
- d) $\underline{\hspace{1cm}} + 4 = 35 + 20$

Name: _____

Fill in the missing number to balance the equation

- a) $14 + 26 = \underline{\hspace{1cm}}$
- b) $38 + 21 = \underline{\hspace{1cm}} + 11$
- c) $45 + \underline{\hspace{1cm}} = 67$
- d) $\underline{\hspace{1cm}} + 4 = 35 + 20$

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 format.

Materials

What materials will need for the activity.

- Jeopardy board and questions
- Buzzer or bell



Instructions

How you will complete the activity.

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

Name: _____

95

Jeopardy Questions

Ask students the questions below

\$100	\$200	\$300	\$400	\$500
$__ + 3 = 5$	$__ + 7 = 20$	$10 + __ = 45$	$20 + __ + 15 = 68$	$3 + __ = 7 + 5$
$__ + 15 = __$	$__ + 12 = 29$	$18 + __ = 53$	$25 + 18 + __ = 100$	$__ + 18 = 50 + 13$
$7 + __ = 10$	$__ + __ = 15$	$__ + __ = 65$	$32 + 25 + __ = 95$	$4 + __ = 11 + 9$
$__ + 6 = 9$	$__ + 20 = 4$	$__ + __ = 5$	$__ + 22 + __ = 58$	$29 + __ = 12 + 47$
Sam has 6 marbles and finds 11 more. How many does he have now?	Lisa had \$21 and earned \$10 more. Total money?	Max had 30 pencils, he bought 26 more. How many total pencils does he have now?	A bird had 45 worms and bought 23 more. How many worms does it have now?	A farmer had 62 chickens and bought 9 more. How many chickens does he have now?
If Alex has 12 apples and buys 12 more, how many does he have?	Jane had 24 candies and found 13 more. How many does she now have in total?	Tom read 33 pages, then read 22 more. How many total pages did he read?	Lily collected 41 seashells, then 23 more. How many total does she have now?	If a baker baked 68 pies and then baked 24 more, how many pies are there?

Addition Expressions – Equal?

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



Examples: $5 + 3 = 2 + 6$ $4 + 5 \neq 7 + 1$

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

1) $12 + 11 = 17$	7) $16 + 7 = 11 + 11$
2) $27 + 3 = 15$	8) $26 + 5 = 24 + 7$
3) $38 + 10 = 42 + 7$	9) $3 + 1 = 42 + 8$
4) $67 + 7 = 65 + 9$	10) $40 + 30 = 17$
5) $51 + 5 = 11 + 45$	11) $66 + 13 = 4 + 75$
6) $83 + 4 = 70 + 16$	12) $60 + 23 = 53 + 30$

Addition – Which Equation Matches?

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

Example:

$4 + 7$

$9 + 2$

$5 + 5$



Questions Circle the equation that matches the shaded in equation

1)	$25 + 7$	$16 + 12$	$24 + 5$
----	----------	-----------	----------

2)	$46 + 6$	$40 + 7$	$44 + 3$
----	----------	----------	----------

3)	$52 + 14$	$57 + 18$	$61 + 5$
----	-----------	-----------	----------

4)	$63 + 12$	$45 + 35$	
----	-----------	-----------	--

5)	$82 + 12$	$70 + 24$	$55 + 40$
----	-----------	-----------	-----------

6)	$68 + 13$	$75 + 7$	$61 + 20$
----	-----------	----------	-----------

7)	$53 + 22$	$40 + 35$	$55 + 21$
----	-----------	-----------	-----------

Addition – Using Symbols

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



Part 1

Find out the value of the symbol

1) $35 + \square = 70$ =	2) $17 + \text{yellow circle} = 24$ $\text{yellow circle} =$	3) $\text{blue circle} + 42 = 55$ $\text{blue circle} =$
4) $27 + \text{blue diamond} = 47$ $\text{blue diamond} =$	5) $11 + \text{green circle} = 16$ $\text{green circle} =$	6) $65 + \text{red circle} = 75$ $\text{red circle} =$
7) $\text{orange diamond} + 88 = 98$ =	8) $51 + \text{blue diamond} = 62$ $\text{blue diamond} =$	9) $\text{orange circle} + 72 = 81$

Part 2

Write your own questions using any symbol you want and to answer.

1)

2)

Using Variables to Solve Addition Equations

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

$$a + b + c = ?$$

$$5 + 3 + 7 = 15$$

$a = 5$

$b = 3$

$c = 7$



Questions Find out the value of the variable

$a + b + c = 8 \quad c = 2$

$_____ + _____ + _____ = _____$

$n + y + t = \quad n = 5 \quad y = 10 \quad t = 5$

$_____ + _____ + _____ = _____$

$c + r + p = \quad c = 4 \quad r = 12$

$_____ + _____ + _____ = _____$

$g + h + k = \quad g = 8 \quad h = 4 \quad k = 8$

$_____ + _____ = _____$

$e + c + g = \quad e = 13 \quad c = 7 \quad g = 10$

$_____ + _____ + _____ = _____$

$a + b + c = \quad a = 5 \quad b = 8 \quad c = 3$

$_____ + _____ = _____$

$a + b + c = \quad a = 5 \quad b = 12 \quad c = 12$

$_____ + _____ + _____ = _____$

$n + y + t = \quad n = 7 \quad y = 5$

$_____ + _____ + _____ = _____$

$c + r + p = \quad c = 4 \quad r = 8 \quad p = 21$

$_____ + _____ + _____ = _____$

$g + h + k = \quad g = 8 \quad h = 10 \quad k = 10$

$_____ + _____ + _____ = _____$

$e + c + g = \quad e = 13 \quad c = 15 \quad g = 10$

$_____ + _____ + _____ = _____$

$a + b + c = \quad a = 5 \quad b = 15 \quad c = 20$

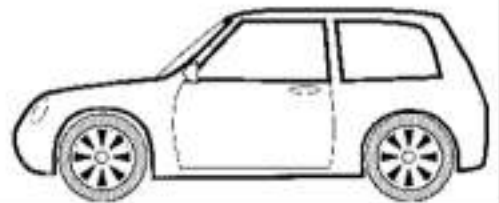
$_____ + _____ + _____ = _____$

Word Problems – Solving Addition Equations

Questions

Answer the questions below

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

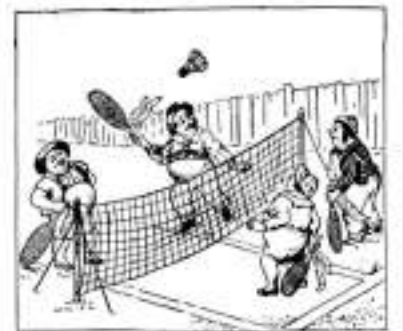


2) Steve got 25 points for beating level 1 in a video game. He got 33 more points for beating level 2. How many points did he have after level 2?



Bonus – He had 78 total points after beating level 3. How many points did he get in level 3?

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



Pre-Algebra – Balancing Subtraction Equations

Balance the scales by taking away circles from the scale

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



$$7 - 4 = 3$$

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



$$11 - \square = 8$$



$$8 - \square = 4$$



$$10 - \square = 4$$



$$9 - \square = 1$$



$$11 - \square = 4$$



$$13 - \square = 3$$



$$11 - \square = 4$$



$$14 - \square = 2$$



$$6 - \square = 0$$

Activity Title: Balancing Act**Objective**

What are we learning about?

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

Materials

What you will need for the activity.

- Small balls or objects
- A set of weights of different weights. A minimum of 25 grams
- Paper
- Pencils
- Set of pre-written addition and subtraction problems

**Instructions**

How you will complete the activity.

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

Equations

Pre-written addition and subtraction problems

$$3 + 2 = 5$$

$$11 - 4 = 7$$

$$4 + 2 = 3 + 3$$

$$5 + 4 = 7 + 2$$

$$10 + 15 = 4$$

$$8 - 4 - 2 = 2$$

$$19 - 7 - 8 = 8 - 2 - 2$$

$$7 + 2 + 1 = 9 + 1$$

$$6 + 1 + 3 = 4 + 2 + 4$$

Subtraction to 50 – Are They Equal?

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

$14 - 3 = 11$

$22 - 3 \neq 18$

$36 - 5 = 31$

Questions Put a slash \neq through the equal sign if it is not balanced

1) $13 - 2 = 11$

2) $24 - 4 = 20$

3) $15 - 4 = 10$

4) $16 - 3 = 12$

5)

6) $18 - 3 = 14$

7) $22 - 5 = 17$

8) $26 - 6 = 20$

9) $3 - 3 = 20$

10) $28 - 5 = 23$

11) $31 - 3 = 27$

12) $30 - 2 = 30$

13) $36 - 5 = 31$

14) $39 - 4 = 34$

15) $37 - 4 = 33$

16) $44 - 0 = 44$

17) $46 - 6 = 41$

18) $50 - 5 = 45$

Subtraction – Are They Equal?

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

$7 - 2 = 5$

$25 - 6 \neq 18$

$15 - 11 = 4$

Questions

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

1) $6 - 5 = 1$	2) $10 - 4 = 6$	3) $16 - 5 = 12$
4) $23 - 6 = 16$	5) $20 - 4 = 16$	6) $19 - 3 = 16$
7) $32 - 4 = 28$	8) $23 - 3 = 20$	9) $28 - 4 = 24$
10) $43 - 10 = 33$	11) $45 - 4 = 42$	12) $45 - 4 = 41$
13) $53 - 4 = 49$	14) $68 - 4 = 65$	15) $56 - 6 = 51$
16) $75 - 0 = 75$	17) $100 - 1 = 99$	18) $116 - 5 = 111$
19) $109 - 4 = 104$	20) $127 - 6 = 121$	21) $175 - 6 = 159$

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 the equation is not balanced

- a) $76 - 5 = 7$
- b) $92 - 4 = 88$
- c) $90 - 4 = 100 - 14$
- d) $35 - 1 = 80 - 36$

Name: _____

Put a slash through the equal sign if the equation is not balanced

- a) $76 - 5 = 78$
- b) $92 - 4 = 88$
- c) $90 - 4 = 100 - 14$
- d) $35 - 1 = 80 - 36$

Name: _____

Put a slash through the equal sign if the equation is not balanced

- a) $76 - 5 = 78$
- b) $92 - 4 = 88$
- c) $90 - 4 = 100 - 14$
- d) $35 - 1 = 80 - 36$

Name: _____

Put a slash through the equal sign if the equation is not balanced

- a) $76 - 5 = 78$
- b) $92 - 4 = 88$
- c) $90 - 4 = 100 - 14$
- d) $35 - 1 = 80 - 36$

Pre-Algebra – Change Unknown

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

Examples:

$$\begin{array}{c} 6 \\ \wedge \\ 13 - 7 = 6 \end{array}$$

$$\begin{array}{c} 14 \\ \wedge \\ 22 - 8 = 14 \end{array}$$

Question: Find the missing number to balance the equation

1) $9 - \underline{\hspace{2cm}} = 4$

2) $8 - \underline{\hspace{2cm}} = 4$

3) $10 - \underline{\hspace{2cm}} = 3$

4) $1 \underline{\hspace{2cm}} = 7$

5) $13 - \underline{\hspace{2cm}} = 6$

6) $18 \underline{\hspace{2cm}} 11$

7) $21 - \underline{\hspace{2cm}} = 15$

8) $24 - \underline{\hspace{2cm}} = 9$

9) $26 - \underline{\hspace{2cm}} = 19$

10) $32 - \underline{\hspace{2cm}} = 28$

11) $36 - \underline{\hspace{2cm}} = 29$

12) $48 - \underline{\hspace{2cm}} = 38$

13) $59 - \underline{\hspace{2cm}} = 51$

14) $75 - \underline{\hspace{2cm}} = 62$

Pre-Algebra – Start Unknown

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

Examples:

$$\begin{array}{c} 10 \\ \wedge \\ 17 - 7 = 10 \end{array}$$

$$\begin{array}{c} 7 \\ \wedge \\ 30 - 23 = 7 \end{array}$$

Question: Fill in the missing number to balance the equation

1) _____ - _____ = _____

2) _____ - 4 = 7

3) _____ - 5 = 10

4) _____ - 3 = 8

5) _____ - 7 = 13

6) _____ - 6 = 2

7) _____ - 4 = 15

8) _____ - 5 = _____

9) _____ - 6 = 24

10) _____ - 5 = 25

11) _____ - 8 = 25

12) _____ - 9 = 40

13) _____ - 12 = 43

14) _____ - 13 = 62

Activity Title: Card Sort Challenge

Objective

What are we learning about?

The objective of this activity is to help students practice their addition and subtraction skills by forming correct equations that match a given result. This activity encourages teamwork, critical thinking, and quick problem-solving.

Material

What you will need for the activity.

- Index cards
- Markers
- Timer (optional)
- Whiteboard or chart paper (for writing results)



Instructions

How you will complete the activity.

1. Prepare index cards in advance by writing different numbers on some cards and operation signs (plus and minus) on others.
2. Divide the class into small groups, each group given a set of number cards and operation cards. Optional: hand out more than 1 set to each group.
3. Write a target number on the board that each group needs to reach using the cards provided.
4. Set a timer for 5 minutes. Each group must try to arrange their cards into as many correct equations as possible that equal the target number.
5. At the end of the timer, ask each group to share their equations with the class. Verify the correctness of each equation.
6. Groups earn points for each correct equation they create. Bonus points if they use all their cards.
7. The group with the most points at the end wins.

Name: _____

Index Cards

Cut out the index cards below

0

1

2

3

4

6

7

8

9

+

+

-

+

-

PREVIEW

Reflection

Answer the questions below.

1) How did working in a group help you solve the problem?

2) What was the most challenging part of this activity?

3) How could you improve your work if you were to do this activity again?

4) What strategies did you use to decide which operation to use for equations?

5) What did you learn about addition and subtraction from this activity?

PREVIEW

Subtraction Expressions – Equal?

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

Examples: $8 - 5 = 9 - 6$ $10 - 5 \neq 7 - 1$

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

1) $15 - 17$

7) $25 - 3 = 26 - 3$

2) $37 - 5 = 38 - 6$

8) $27 - 5 = 28 - 6$

3) $58 - 11 = 55 - 7$

9) $17 - 13$

4) $70 - 7 = 80 - 17$

10) $39 - 14 = 40 - 15$

5) $78 - 5 = 82 - 8$

11) $86 - 5 = 94 - 13$

6) $95 - 15 = 100 - 18$

12) $100 - 12 = 95 - 7$

Subtraction – Which Equation Matches?

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

Example:

$9 - 4$

$8 - 3$

$10 - 6$



Question _____ the equation that matches the shaded in equation

1)

$24 - 13$

$27 - 15$

2)

$28 - 14$

$27 - 13$

3)

$30 - 12$

$39 - 12$

$39 - 21$

4)

$47 - 12$

$46 - 11$

5)

$62 - 13$

$61 - 12$

$63 - 15$

6)

$85 - 15$

$90 - 15$

$90 - 20$

7)

$99 - 15$

$98 - 13$

$90 - 6$

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, fostering critical thinking and problem-solving skills in a collaborative group setting.

Materials

What will you need for the activity.

- Pre-prepared pre-made equations cards.
- Small bags or envelopes to hold the cards for each group

Instructions

How you will complete the activity.

1. Before the class, the teacher will cut out the prepared matching game cards.
2. Divide the students into small groups and give each group a small envelope 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.



Cards

Matching Game Cards

$10 + 15$

$20 + 5$

$18 + 22$

$25 - 5$

$50 - 25$

$45 - 20$

$11 + 13$

$19 + 5$

PREVIEW

Cards

Matching Game Cards

$45 - 15$

$35 - 5$

$20 + 19$

$60 - 20$

$45 - 10$

$14 + 25$

$27 + 12$

$100 - 30$

$85 - 15$

PREVIEW

Name: _____

123

Curriculum Connection
A.1

Cards

Matching Game Cards

$19 + 18$

$30 + 7$

$68 - 3$

$42 + 18$

$75 + 5$

$90 - 45$

$75 - 30$

$64 + 18$

$73 + 9$

PREVIEW

Subtraction – Using Symbols

**Part 1**

Find out the value of the symbol

1) $\bullet - 10 = 18$ $\bullet =$	2) $42 - \blacktriangle = 30$ $=$	3) $80 - \bullet = 65$ $\bullet =$
4) $\blacktriangle = 12$ $\blacktriangle =$	5) $\blacklozenge - 11 = 29$	6) $90 - 70 = \blacklozenge$ $=$
7) $54 - \blacktriangle = 50$ $\blacktriangle =$	8) $\bullet - \bullet =$ $\bullet =$	9) $78 - \bullet = 64$ $\bullet =$

Part 2

Write your own questions using any symbols you want. Try to get a friend to answer.

1)	2)
3)	4)

Word Problems – Solving Subtraction Equations

Questions

Answer the questions below

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



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



Bonus: He saved 15 more dollars. Can he buy a new _____ dollars?

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



Task Cards: Mystery Number Detectives

Objective

What are we learning about?

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

Materials

What you will need for the activity.

- 2 sets of task cards
- Separate sheets of paper for answers
- Pencils



Instructions

How to complete the activity

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

Task Cards

Cut out the task cards below

Card 1:

$$14 - p = 10$$

solve for p

- a) 1 b) 4 c) 5

Card 2:

$$80 - \bullet = 65$$

solve for \bullet

- a) 15 b) 25 c) 35

$$11 - \underline{\quad}$$

- a) 4 b) 2

Card 4:

$$x + 45 = 76$$

solve for x

- a) 31 b) 31 c) 41

Card 5:

$$31 + y = 58$$

solve for y

- a) 17 b) 27 c) 37

solve for z

- a) 33 b) 23 c) 43

Card 7:

$$18 - a = 9$$

solve for a

- a) 9 b) 7 c) 11

Card 8:

$$b + 16 = 24$$

solve for b.

- a) 8 b) 18 c) 28

Task Cards

Cut out the task cards below

Card 9:

$$7 + c = 14$$

solve for c

- a) 7 b) 9 c) 5

Card 10:

$$34 - d = 25$$

solve for d

- a) 9 b) 19 c) 29

Card 12:

Leah had 21 pencils. She lost y pencils and now has 7. How many did she lose?

- a) 14 b) 12 c) 14

Card 13:

A tree was 9m tall. It grew e meters and is now 43m tall. How much did it grow?

- a) 33m b) 31m c) 34m

Card 15:

$$50 - g = 15$$

solve for g

- a) 35 b) 45 c) 25

Card 16:

$$27 + h = 35$$

solve for h

- a) 8 b) 18 c) 28

Task Cards

Cut out the task cards below

Card 17:

$$j - 9 = 10$$

solve for j

- a) 1 b) 1 c) 9

Card 18:

$$42 + k = 59$$

solve for k

- a) 17 b) 7 c) 27

$$m + 4 = 30$$

solve for m

- a) 53 b) 13 c) 43

Card 20:

$$64 + n = 88$$

solve for n

- a) 4 b) 14 c) 34

Card 21:

Paula baked 56 cookies. She ate 14 cookies and now has 42. How many did she eat?

- a) 17 b) 12 c) 14

Card 22:

There are 4 birds in a tree. 17 birds were flying. How many birds were on the ground?

- a) 17 b) 19 c) 21

Card 23:

$$q + 12 = 29$$

solve for q

- a) 17 b) 27 c) 7

Card 24:

$$36 - r = 15$$

solve for r

- a) 21 b) 31 c) 11

Name: _____

133

Task Cards: Mystery Number Detectives

Answers

Record your answers below

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

13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	

PREVIEW

Multiplication – Are They Equal?

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

$2 \times 2 \neq 5$

$3 \times 3 = 9$

$5 \times 2 \neq 11$

InstructPut a slash (\neq) through the equal sign if it is not balanced

1) $2 \times 2 = 5$	2) $10 \times 3 = 30$	3) $2 \times 3 = 5$
4) $5 \times 5 = 25$	5) $5 \times 8 = 40$	6) $3 \times 5 = 16$
7) $10 \times 2 = 12$	8) $10 \times 5 = 50$	9) $5 \times 4 = 20$
10) $10 \times 10 = 90$	11) $2 \times 7 = 14$	
13) $10 \times 4 = 40$	14) $5 \times 1 = 10$	15) $10 \times 6 = 16$
16) $2 \times 10 = 20$	17) $5 \times 8 = 40$	18) $3 \times 10 = 30$
19) $2 \times 7 = 14$	20) $7 \times 5 = 30$	21) $10 \times 4 = 40$

Pre-Algebra – Balancing Multiplication Equations

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

$$\begin{array}{c} 15 \\ \swarrow \quad \searrow \\ 5 \times 3 = 15 \end{array}$$

Examples:

$$\begin{array}{c} 6 \\ \swarrow \quad \searrow \\ 2 \times 3 = 6 \end{array}$$

Question

Fill in the missing number to balance the equation

1)

=

2) $10 \times 3 =$

3) $10 \times$

=

4) $3 \times$

= 6

5)

$\times 5 = 25$

6)

$\times 45 =$

7) $5 \times 10 =$

8) $2 \times$

$= 20$

9) $5 \times$

$= 20$

10) $10 \times 10 =$

11) $2 \times$

$= 8$

12) $3 \times 2 =$

13) $10 \times$

$= 60$

14) $2 \times 9 =$

Multiplication – Which Equation Matches?

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

Example:

2×3

1×6

4×2



Question _____ the equation that matches the shaded in equation

1)

10×1

6×2

2)

6×3

2×9

3)

5×4

10×1

6×3

4)

8×2

4×4

5)

9×4

7×5

6×6

6)

10×3

7×5

6×5

7)

8×3

6×4

7×3

Multiplication Word Problems**Questions**

Answer the questions below

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



2) Sam is a truck driver. He drove 100 km per hour. In total, he drove 800 km yesterday. How many hours did he drive?



3) Courtney scored 3 goals in each game she played. She scored 27 goals in total. How many games did she play?



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



Division – Are They Equal?

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

$4 \div 2 \neq 1$

$6 \div 2 = 3$

$10 \div 2 \neq 8$

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

1) $3 \div 3 = 1$

2) $10 \div 10 = 10$

3) $5 \div 1 = 5$

4) $8 \div 2 = 4$

5) $10 \div 5 = 2$

6) $1 = 2$

7) $10 \div 5 = 50$

8) $6 \div 2 = 3$

9) $20 \div 5 = 4$

10) $25 \div 5 = 6$

11) $50 \div 10 = 5$

12) $16 \div 2 = 7$

13) $20 \div 10 = 2$

14) $15 \div 5 = 5$

Pre-Algebra – Balancing Division Equations

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

$$\begin{array}{c} 5 \\ \wedge \\ 15 \div 3 = \boxed{5} \end{array}$$

Examples:

$$\begin{array}{c} 5 \\ \wedge \\ \boxed{10} \div 2 = 5 \end{array}$$

Questions

Fill in the missing number to balance the equation

1) $9 = \square$

2) $6 \div 3 = \square$

3) $10 \div \square = 5$

4) $6 \div \square = 2$

5) $\square \div 5 = 5$

6) $\square \div 2 = 2$

7) $5 \div 1 = \square$

8) $20 \div \square = 4$

9) $15 \div \square = 3$

10) $10 \div 10 = \square$

11) $25 \div \square = 5$

12) $30 \div 6 = \square$

13) $10 \div \square = 2$

14) $18 \div 2 = \square$

Division – Which Equation Matches?

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

Example

$12 \div 4$

$9 \div 3$

$16 \div 4$



Questions Choose the equation that matches the shaded in equation

1)

$10 \div 2$

$5 \div 1$

$12 \div 6$

2)

$6 \div 3$

$10 \div 5$

$12 \div 6$

3)

$16 \div 4$

$14 \div 7$

$28 \div 7$

4)

$25 \div 5$

$10 \div 2$

5)

$8 \div 2$

$15 \div 3$

$16 \div 4$

6)

$18 \div 3$

$30 \div 5$

$42 \div 6$

7)

$24 \div 6$

$49 \div 7$

$40 \div 10$

Division Word Problems

Questions

Answer the questions below

1) Colton and his 3 other friends shoveled driveways today. At the end of the day, the 4 friends each took home \$20. How much did all four friends make in total?



2) Walker had a bag of candies. He gave 7 candies to each of his 9 friends. How many total candies did he have?



3) Piper biked a long distance today. She biked 6 km each hour for 8 hours. How many kilometres did she bike?



4) Hudson sold a lot of lemonade today. He sold 7 cups each hour for 8 hours. How many cups did he sell today?



Algebra Quiz - Equations**Part 1**

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

1) $25 + 15 = 45$

2) $42 + 6 = 48$

3) $87 + 15 = 103$

4) $19 + 10 = 29$

5) $274 - 24 = 249$

6) $326 - 14 = 318$

Part 2

Fill in the missing number to balance the equation

1) $13 + 8 = \underline{\quad}$

2) $\underline{\quad} + 6 = 12$

3) $9 + \underline{\quad} = 65$

4) $137 + 8 = \underline{\quad}$

5) $\underline{\quad} + 18 = 32$

6) $25 + \underline{\quad} = 60$

7) $9 - 6 = \underline{\quad}$

8) $\underline{\quad} - 12 = 8$

9) $47 - 8 = \underline{\quad}$

10) $109 - 5 = \underline{\quad}$

11) $\underline{\quad} - 7 = 132$

12) $170 - 6 = \underline{\quad}$

Part 3

Circle the equation that matches the shaded in equation

1) $16 + 5$

$11 + 11$

$18 + 3$

2) $17 - 5$

$23 - 10$

$21 - 9$

3) 3×3

6×4

5×4

4) $24 \div 3$

$16 \div 4$

$40 \div 5$

Part 4

Put a \neq or $=$ sign if it is not balanced

1) $20 - 15 = 22 - 2$

$12 + 11 = 13 + 10$

3) $8 \times 5 = 6 \times 6$

4) $4 = 30 \div 10$

5) $20 + 15 = 50 - 20$

6) $4 \times 3 = 6$

Part 5

Solve the word problem below. Make sure to write the answer.

Alexa saved 47 dollars from her allowance. She was given some money from her grandmother for her birthday. She now has 80 dollars. How much did her grandmother give her?