



Preview - Information



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Google Slides Lessons Preview





BC Math Curriculum Patterning & Equations – Grade 2

3-Part Lesson Format

Part 1 – Minds On!

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

LEARNING GOAL

We are learning to identify and describe different patterns made with geometric shapes so we can recognize and understand patterns around us in everyday life.

Creating Repeating Patterns - Colours

Drag the coloured shapes from the shape bank to create repeating patterns with different colours.

	1)	2)	3)	4)
	😊😊😊😊😊😊😊😊😊😊	♡♡♡♡♡♡♡♡♡♡	☾☾☾☾☾☾☾☾☾☾	☆☆☆☆☆☆☆☆☆☆

SHAPE BANK

😊, ☾, ♡, ☆, ☺, 🌙, 🌟, 🌸, 🍀, 🍁, 🍂, 🍃, 🍄, 🍅, 🍆, 🍌, 🍍, 🍎, 🍇, 🍈, 🍉, 🍊, 🍋, 🍌, 🍍, 🍎, 🍇, 🍈, 🍉, 🍊, 🍋

Part 2 – Action!

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

Part 3 – Consolidation!

- Exit Cards
- Quizzes
- Reflection
- And More!

Exit Card - "I Wonder..."

After completing today's lesson:
Write two "I wonder..." statements about patterns.
These could be about something you learned, noticed, or one still curious about.

Examples:

- I wonder how repeating patterns can be shown with both numbers and shapes.
- I wonder what happens to a pattern when one part changes.



BC Math Curriculum Patterning & Equations - Grade 2

Hundreds Chart

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

Number Patterns 1 - 20

Drag the numbers to extend the patterns below.

1 2 3 4 5 6 7 8 9 0

1 2 3 4 5

1 3 5 7 9

2 4 6 8 10

Drag the numbers to complete the number patterns.

12 14 16 18 20

5 10 15 20 25

10 20 30 40 50



BC Math Curriculum

Patterning & Equations – Grade 2

Increasing Number Patterns

Drag the numbers to extend the patterns below. 1 2 3 4 5 6 7 8 9 0

Pattern Rule: Start at _____, add _____ each time.

Pattern Rule: Start at _____, add _____ each time.

Pre-Algebra

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)

$6 + \underline{\quad} = 8$

2)

$4 + \underline{\quad} = 13$

3)

$7 + \underline{\quad} = 11$

4)

$3 + \underline{\quad} = 8$

5)

$9 + \underline{\quad} = 10$

6)

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

7)

$8 + \underline{\quad} = 9$

8)

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

		TRUE	FALSE			6) $31 + 3 = 35$	TRUE	FALSE
2)	$21 + 9 = 30$	TRUE	FALSE			7) $42 + 7 = 48$	TRUE	FALSE
3)	$5 + 5 = 10$	TRUE	FALSE			8) $63 + 6 = 69$	TRUE	FALSE
4)	$19 + 10 = 39$	TRUE	FALSE			9) $16 + 4 = 22$	TRUE	FALSE
5)	$60 + 3 = 63$	TRUE	FALSE			10) $77 + 8 = 84$	TRUE	FALSE



Workbook Preview



Grade 2

Patterns

Curriculum Expectations

Patterns:

- exploring more complex repeating patterns (e.g., positional patterns, circular patterns)

- identify repeating

- increase (up to 100)

- Métis

**Preview of 100 pages from
this product that contains
281 pages total.**

- First Peoples head/armband patterning

- online video and text: Small Number Counts to 100

Name: _____

5

Repeating Patterns

Part 1

Continue the repeating patterns below by drawing more objects



Part 2

Repeating A, B patterns - Draw the pattern by A and B



Name: _____

6

Repeating Patterns

Questions

Label the images as A/B patterns and continue the pattern

											
A		B	A	A	A	B	A				
											
											
											
											
											

Name: _____

8

Repeating Patterns – Pattern Core

Part 1

Core = Part that repeats – Circle the pattern core and extend the pattern

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

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

A A C A _____, _____, _____, _____

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

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

Part 2

Joe circled the core in each of the patterns below. Was Joe right?

1 2 3 1 2 3 1 2 3

YES NO

5 5 8 8 5 5 8 8

YES

1 2 3 4 5 1 2 3 4 5

YES NO

A B A A B A A B A

YES NO

F H R H F H R H F H R H

YES NO

Exit Cards

Cut Out

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

Name: _____

Circle the pattern core

- 1) X, Y, Y, Z, X, Y, Y, Z
- 2) 🍓, 🌟, 🌟, 🌟, 🌟, 🍓, 🌟, 🌟, 🌟
- 3) M, N, O, M, N, O
- 4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____

Circle the pattern core

- 1) X, Y, Y, Z, X, Y, Y, Z
- 2) 🍓, 🌟, 🌟, 🌟, 🌟, 🍓, 🌟, 🌟, 🌟
- 3) M, N, O, M, N, O
- 4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____

Circle the pattern core

- 1) X, Y, Y, Z, X, Y, Y, Z
- 2) 🍓, 🌟, 🌟, 🌟, 🌟, 🍓, 🌟, 🌟, 🌟
- 3) M, N, O, M, N, O
- 4) 1, 2, 3, 3, 1, 2, 3, 3

Name: _____

Circle the pattern core

- 1) X, Y, Y, Z, X, Y, Y, Z
- 2) 🍓, 🌟, 🌟, 🌟, 🌟, 🍓, 🌟, 🌟, 🌟
- 3) M, N, O, M, N, O
- 4) 1, 2, 3, 3, 1, 2, 3, 3

Creating Repeating Patterns - Colours


Questions

Colour the shapes below in different colours by creating a pattern

1) 

2) 

3) 

4) 

5) 

6) 

7) 

8) 

Creating Repeating Patterns – Shape Colour

Questions

Colour the shapes below in different colours by creating a pattern



Red

Blue

Green

Red

Blue

Green

Red

Blue



PREVIEW

Extending Repeating Patterns - Letters

Questions

Continue the pattern below by writing more letters

1)	A	A	B	A	A	B					
2)	P	R	S	P	P						
3)	S	N			E	L					
4)	E	E	L		E		E	L			
5)	Y	S	B	B		Y	S	B	B	Y	
6)	A	B	A	C	A		A	C		B	A
7)	P	E	K	E	P		K		P	E	

Exit Cards

Cut Out

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

Name: _____

Continue the patterns below by writing more letters and numbers

- 1) _____, N, M, _____, _____
- 2) 4, 4, _____, 2, 4, _____, _____
- 3) 8, 8, _____, 7, 8, 8, 6, 7, _____, _____
- 4) J, K, J, _____, K, J, K, J, _____, _____, _____

Name: _____

Continue the patterns below by writing more letters and numbers

- 1) M, L, M, N, _____, L, M, N, M, _____, _____
- 2) 4, 4, _____, 2, 4, 4, 1, 2, 4, _____, _____
- 3) 8, 8, _____, 7, 8, 8, 6, 7, 8, _____, 6, _____
- 4) J, K, J, _____, K, J, K, J, _____, _____, _____

Name: _____

Continue the patterns below by writing more letters and numbers

- 1) M, L, M, N, _____, L, M, N, M, _____, _____
- 2) 4, 4, _____, 2, 4, 4, 1, 2, 4, _____, _____
- 3) 8, 8, _____, 7, 8, 8, 6, 7, 8, _____, 6, _____
- 4) J, K, J, _____, K, J, K, J, _____, _____, _____

Name: _____

Continue the patterns below by writing more letters and numbers

- 1) M, L, M, N, _____, L, M, N, M, _____, _____
- 2) 4, 4, _____, 2, 4, 4, 1, 2, 4, _____, _____
- 3) 8, 8, _____, 7, 8, 8, 6, 7, 8, _____, 6, _____
- 4) J, K, J, _____, K, J, K, J, _____, _____, _____

Repeating Patterns - Bracelets



Questions

Draw the repeating patterns on the bracelets

1)

2)

3)

4)

5)

6)

7)

8)

PREVIEW

Name: _____

Repeating Patterns - Bracelets



Questions

Draw your own bracelets using repeating

PREVIEW

Name: _____

Repeating Patterns - Necklace

Questions

Draw your own necklace using a repeating pattern



Activity: Métis Finger-Weaving Patterns

Objective

What are we learning about?

Students will explore repeating patterns through Métis finger-weaving, connecting mathematics with Indigenous cultural art. This activity helps students recognize, extend, and create visual patterns while learning about the Métis tradition of sash weaving.

Materials

What you will need for the activity.

- Yarn or wool in different colours
- Tape or clips to hold the strands to a desk or board
- Sample photo of a piece of a sash



Instructions

How you will complete the activity

1. Begin by showing the students an example of a Métis sash and explain that it is a traditional woven design made by Métis people. Talk briefly about how each colour and pattern has meaning.
2. Choose three colours of yarn and tape them evenly in front of each student.
3. Demonstrate how to separate the strands and weave by passing one over and under the others to form a repeating pattern.
4. As you demonstrate, describe the pattern out loud (for example, "red, white, blue, yellow, red") and ask the class to repeat the pattern verbally.
5. Have students begin weaving slowly, repeating the same sequence of colours each time. Encourage them to notice when their pattern repeats.
6. After several repeats, pause and ask: "What comes next in your pattern?" "Can you describe your pattern core?"
7. Once students have finished their woven piece, have them draw their pattern on paper, labelling each colour or symbol.
8. Invite a few students to share their weaving and explain the pattern they created.
9. End by discussing how patterns in art, music, and math can show both creativity and structure—just like in Métis weaving.

Liam and the Colours of the Sash

Liam loved visiting his Grandpa's workshop. It was full of stories — and strings. Red, blue, yellow, green, and white yarns hung neatly from hooks on the wall. One chilly morning, Grandpa handed Liam several strands.

"Today, I want you to finger weave a Métis sash," Grandpa said. "The sash isn't just a piece of fabric — it tells who we are."

As Grandpa showed him how to weave, crossing one strand over another, the pattern slowly began to grow. "Each colour has meaning," Grandpa explained. "Red is for the blood of our ancestors — the Métis people who worked hard and never gave up. Blue stands for the rivers that carried our canoes. Yellow is for the sun that gave them warmth. Green is for the land that cared for us. White is for peace — the hope that all of us can live together in harmony."

Liam's fingers worked carefully, just like Grandpa's. "Weaving takes patience," Grandpa said. "Every strand depends on the others. Just like people, they are stronger when they're woven together."

When Liam finished, he held up his first sash. The colours shone in the light, each one telling part of a story — his story, now woven into the Métis tradition.

Activity: First Peoples Head/Armband Patterning

Objective

What are we learning about?

Students will create repeating and symmetrical patterns inspired by First Peoples art and traditional beadwork designs. Through this creative activity, students will explore colour, shape, and repetition to represent balance and community in Indigenous design.

Materials

What you will need for the activity.

- Coloured paper or cardstock (long enough to wrap around a head)
- Small paper circles, squares, or beads
- Glue or tape
- Sample images of traditional First Peoples woven designs



Instructions

How you will complete the activity.

1. Begin by showing examples of First Peoples woven designs, beaded necklaces, or arm bands. Discuss how designs often use repeating patterns and colors to represent nature, stories, and identity.
2. Explain that students will design their own patterned headbands or armbands using colours and shapes to create balance and repetition.
3. Give each student one long strip of paper (or fabric) to form the base of the band.
4. Demonstrate how to plan a repeating pattern core with shapes or colors (for example: red - blue - yellow - blue, or triangle - circle - triangle - circle).
5. Use the ruler to mark equal spaces along the band to help keep the pattern even.
6. Have students glue or draw their shapes following the chosen pattern across the entire strip. Encourage them to say the pattern aloud as they work.
7. Once their first pattern is complete, ask: "What do you notice about your pattern? Does it repeat or mirror?"
8. Students may then create a mirrored (symmetrical) design by making the second half of the band a reflection of the first half (using a second strip of paper).
9. After finishing, help students wrap and fasten their design into a headband or armband.

Willow's Special Headband

Willow lived in a small village near the river, where everyone worked together and shared stories. One morning, her grandmother called her over. "Today, you will learn to make your own headband," Grandma said, smiling. "It will tell a story."

Grandma laid out four balls of bright yarn — red, blue, yellow, and green. "Each colour means something," Grandma explained. "Red for the earth that gives us life. Blue for the water that sustains us. Yellow for the sun that guides our days. Green for the forest that shelters us."

Willow watched carefully as Grandma began weaving. She went over and under, over and under, the colours repeating in a calm, steady pattern. "This pattern shows balance," said Grandma. "When you wear it, you will be in balance with others and with the land."

Willow spent the whole afternoon weaving. When she finished, she tied the headband around her forehead and looked into the water's reflection. She felt proud — her headband wasn't just pretty; it meant something.

That night, as the drumming began by the fire, Willow danced with her new headband shining in the firelight. She felt connected — to her family, her people, and the land that held their stories.

Reflection

Answer the questions below.

1) Describe your pattern below.

2) What materials did you use for your pattern?

3) Describe your pattern (using A - red, blue, blue, green = ABBC)

4) In the story, how did Willow feel after making her headband?

5) Draw your headband/armband below.



Extending Repeating Patterns – Word Problems**Questions**

Answer the question below

1)

A traffic light follows a sequence of colours: red, green, yellow, red, green, yellow, ...

Based on the repeating pattern, what will be the colour of a traffic light on the 12th change?



2)

A teacher uses a variety of teaching tools for her class: flashcards, video, question cards, and a quiz, ...

Identify the repeating pattern and determine which teaching aid will be used on the 15th day.



3)

A gardener plants flowers in a row, following a specific pattern: roses, tulips, lilies, sunflowers, roses, tulips, lilies, sunflowers, ...

According to the repeating pattern, what type of flower will be planted in the 28th position?



Extending Repeating Patterns – Word Problems**Questions**

Answer the question below

- 1) A park has a schedule for organizing free activities:
yoga, yoga, painting, dance, exercise, yoga, yoga, painting, dance,
exercise...
- Based on the repeating pattern, which activity will be held on the 15th day?



- 2) In a fruit salad, fruits are added in a specific order:
apple, apple, apple, orange, grape, apple, apple,
apple, orange, grape, grape...
- According to the repeating pattern, which fruit should be added as the 18th ingredient?



- 3) A school cafeteria serves a cycle of five daily meal options:
pizza, tacos, burgers, pasta, sandwiches, pizza, tacos,
burgers, pasta, sandwiches, ...
- Based on the repeating pattern, determine which meal will be served on the 24th day.



Exit Cards

Cut Out

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

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Name: _____

In a toy factory, cars are painted in a sequence of colours: red, red, blue, green, yellow, red, red, blue, green, yellow. According to the repeating pattern, which colour will be used for the 20th car?

Answer: _____

Challenge Word Problem – Counting Totem Poles**Instructions**

Read the story and answer the question

Kaya and the Carved Totems

Kaya lived in a Haida village by the ocean, where four tall totem poles stood in a circle beside the big house. Each totem belonged to a family — Raven, Eagle, Bear, and Orca.

One morning, Kaya's grandfather smiled and said, "Kaya, if you walk past the totems and count each one, can you tell me which totem you will stop at when you reach fifty?"

Kaya started counting at the Raven's totem. She counted as she walked:

"Raven is 1, Eagle is 2, Bear is 3, Orca is 4."

When she reached 5, she walked past the Raven's totem. She noticed that every four steps brought her to a new totem where she began. She stopped for a moment watching the bright sunlight shine off the carved wings of the Eagle.

Kaya thought hard. "There are four totems... and I need to know where I'll land at fifty," she whispered. She began to count in groups of four, tracing a pattern in the sand with a stick.

Finally, she smiled. "I think I know whose totem I'll stop at!" she said.

But she didn't tell Grandfather right away. She looked up and asked,

**"What do you think? Which totem will I stop at when I reach fifty?"**

Challenge Word Problem – Counting Canoes**Instructions**

Read the story and answer the question

Taan and the Canoes on the Beach

Early one morning, Taan walked down to the beach where the tide was low and the sand was cool beneath his feet. His uncle had pulled up the canoes and placed them in a big circle in the water. Each canoe had a painted animal on it: Eagle, Bear, Wolf, and Owl.

Uncle smiled and said, "I have a challenge for you. If you start at the Raven and walk around the circle, counting each canoe in order, which one will you land on when you reach seventy-five?"

Taan began to walk slowly, his toes dipping into the sand. "Raven is 1, Eagle is 2, Bear is 3, Wolf is 4, Owl is 5," he counted.

When he took one more step, he was back at the beginning. He noticed that every five canoes brought him back to the beginning.

He sat down on a driftwood log and thought for a moment. "If I count to 75," he said, "I can figure this out!"

He smiled and stood up, looking around the circle. "I've got it! Have

**Which canoe will he land at when he counts 75 of them?**

Challenge Word Problem – Counting Cedar Baskets**Instructions**

Read the story and answer the question

Niska and the Circle of Baskets

On a warm spring morning, Niska helped her auntie set out six woven cedar baskets in a big circle on the grass. Each basket had a different design – waves, mountains, a raven, sun, and berries.



Auntie said, "The baskets are special," she said. "They show the beauty of our land. But I have a question for you. If you start at the waves basket and walk around the circle, touching each one in order, which basket will you reach when you reach one hundred?"

Niska began to count as she walked around the circle. "Waves is 1, mountains is 2, raven is 3, sun is 4, berries is 5, waves is 6."

When she took one more step, she walked back at the waves basket for 7. She noticed the pattern – every six steps brought her back to the same basket.

She sat down in the grass and thought carefully. "I'll stop right here at the ___ basket!"

"That means I'll stop right here at the ___ basket!"

Growing Patterns

Questions

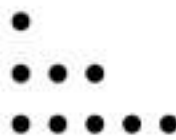
Draw the next line of the increasing pattern

1) Draw the next line in the pattern.



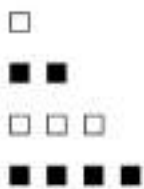
Answer

2) Draw the next line in the pattern.



Answer

3) Draw the next line in the pattern.



4) Draw the next line in the pattern.

Answer

5) Draw the next line in the pattern.

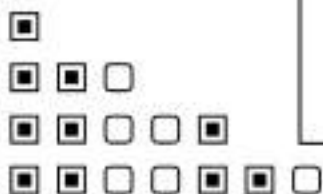


Answer

6) Draw the next line in the pattern.

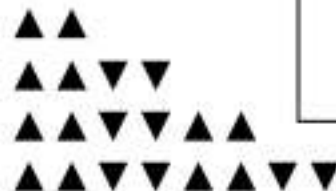


7) Draw the next line in the pattern.



Answer

8) Draw the next line in the pattern.



Answer

Exit Cards

Cut Out

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

Name: _____

Draw the next 2 lines in the pattern.



Name: _____

Draw the next 2 lines in the pattern.



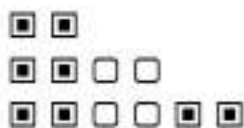
Name: _____

Draw the next 2 lines in the pattern.



Name: _____

Draw the next 2 lines in the pattern.



Increasing Patterns - Shapes

Directions

Shade in the blocks that were added to the pattern



1) Figure 1

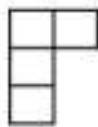


Figure 2

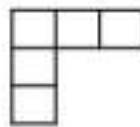


Figure 3

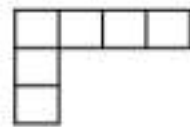


Figure 4



2) Figure 1

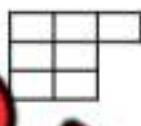


Figure 2

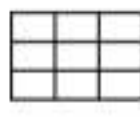


Figure 3

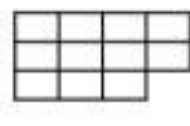
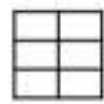


Figure 4



3) Figure 1



Figure 2

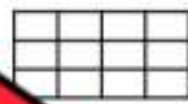


Figure 3

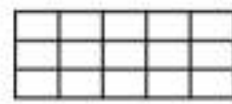


Figure 4



4) Figure 1

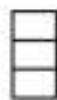


Figure 2



Figure 3

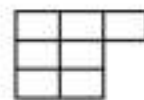


Figure 4



5) Figure 1

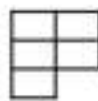


Figure 2

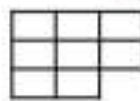


Figure 3



Figure 4



6) Figure 1

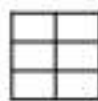


Figure 2

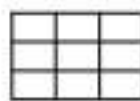


Figure 3

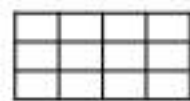


Figure 4



7) Figure 1

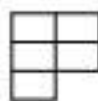


Figure 2



Figure 3

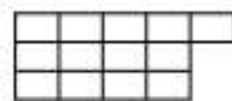

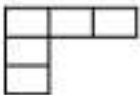
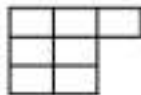


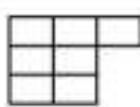

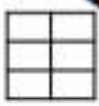


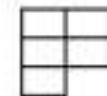
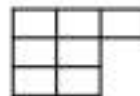

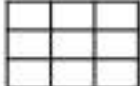
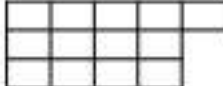


Figure 4

Increasing Patterns - Shapes

Directions

Write how many blocks are below. Then continue the pattern

1)				
2)				
3)				
4)				
5)				

Creating Increasing Patterns With Squares

Part 1

Shade in the block that was added to the pattern



1) Figure 1

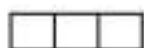


Figure 2

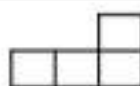


Figure 3

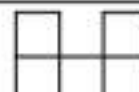


Figure 4



2) Figure 1



Figure 2



Figure 3

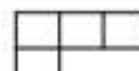


Figure 4



3) Figure 1



Figure 2



Figure 3



Figure 4



4) Figure 1



Figure 3

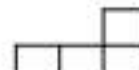


Figure 4

Part 2

Shade in the two blocks that were added to the pattern



1) Figure 1

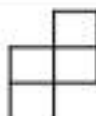
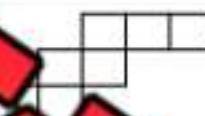


Figure 2



Figure 3



2) Figure 1

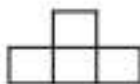


Figure 2

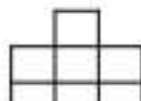


Figure 3



Figure 4



3) Figure 1

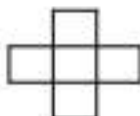


Figure 2

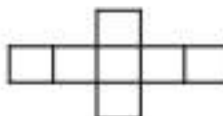


Figure 3

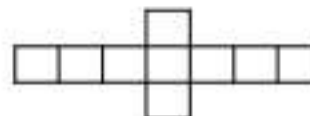


Figure 4



4) Figure 1

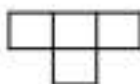


Figure 2

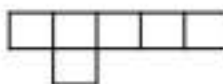


Figure 3

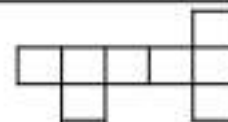


Figure 4

Creating Increasing Patterns With Squares

Part 1

Draw the next figure in the pattern by adding one block

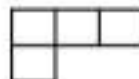


1) Figure 1

Figure 2

Figure 3

Figure 4

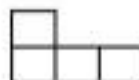


2) Figure 1

Figure 2

Figure 3

Figure 4



3) Figure 1

Figure 3

Figure 4



4) Figure 1

Figure 2

Figure 3

Figure 4

Part 2

Draw the next figure by adding two blocks. Highlight the added blocks



1) Figure 1

Figure 2

Figure 3

Figure 4

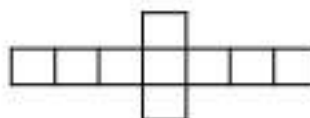
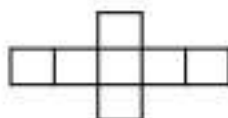
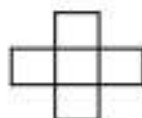


2) Figure 1

Figure 2

Figure 3

Figure 4



3) Figure 1

Figure 2

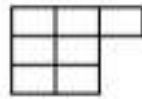
Figure 3

Figure 4

Representing Picture Sequence With Numbers

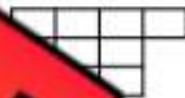
Questions

Write the numerical sequence that represents the picture sequence



1) Figure 1 Figure 2 Figure 3

Numerical Sequence



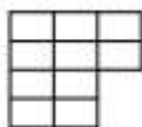
2) Figure 1 Figure 2 Figure 3

Numerical Sequence



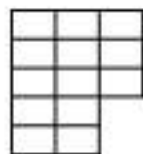
3) Figure 1 Figure 2 Figure 3

Numerical Sequence



4) Figure 1 Figure 2 Figure 3

Numerical Sequence



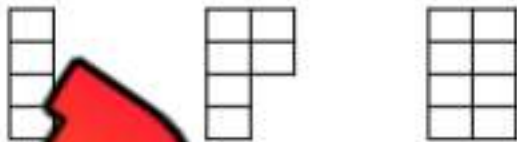
5) Figure 1 Figure 2 Figure 3

Numerical Sequence

Representing Picture Sequence With Numbers

Questions

Write the numerical sequence that represents the picture sequence



1)

Figure 3

Figure 4

Numerical
Sequence

____ / ____ / ____ / ____



2) Figure 1

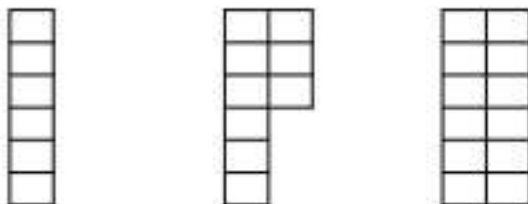
Figure 2

Figure 3

Figure 4

Numerical
Sequence

____ / ____ / ____ / ____



3) Figure 1

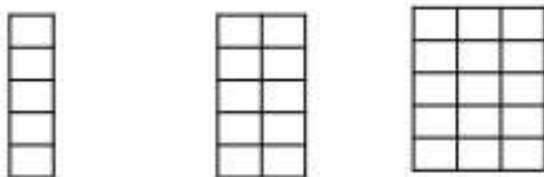
Figure 2

Figure 3

Figure 4

Numerical
Sequence

____ / ____ / ____ / ____



4) Figure 1

Figure 2

Figure 3

Figure 4

Name: _____

Hundreds Chart Patterns

Questions

Fill in the missing numbers

1	2	3		5	6	7	8		10
11			14	15	16		18	19	20
21			24		26	27	28		30
31			34	35	36		38	39	40
	42	43				47	48		50
51	52	53			56			59	60
61		63	64	65				69	
71	72		74	75	76	77			80
	82	83	84		86	87	88		
91	92		94	95	96		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				56	57	58	59	60
61	62	63		65	66	67	68	69	70
71	72	73		75		77	78	79	80
81	82	83	84		86		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			20
21	22	23	24	25	26	27	28		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

Number Patterns 1 - 20**Questions**

Fill in the blanks below

1. 

2. 

3. 

4. 

5. 

PREVIEW

Name: _____

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Number Patterns 1 - 50

Questions

Fill in the blanks below

1.  1 11 21 31
2.  0 16 24
3.  15 20
4.  8 14 20 26
5.  12 16 24 28

Number Patterns – 2s, 5s, 10s**Questions**

Fill in the blanks below

1.



2

4

6

8

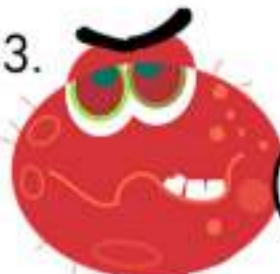
2.



1

20

3.



10

20

30

40

4.



15

20

25

20

5.



20

22

24

26

Number Patterns – 10s**Questions**

Fill in the blanks below

1.



2.



3.



4.



5.



Increasing Patterns - Rules**Questions**

Fill in the blanks by figuring out the pattern rules

2, 4, 6, 8, 10, 12, 14, 16

Start at _____, then add _____ each time

5, 20, 25, 30, 35, 40

Start at _____, then add _____ each time

10, 20, 30, 40, 50, 60, 70

Start at _____, then add _____ each time

5, 8, 11, 14, 17, 20, 23, 26

Start at _____, then add _____ each time

12, 22, 32, 42, 52, 62, 72

Start at _____, then add _____ each time

4, 8, 12, 16, 20, 24, 28, 32

Start at _____, then add _____ each time

Increasing Patterns - Rules**Questions**

Fill in the blanks by figuring out the pattern rules

5, 7, 9, 11, 13, 15, 17, 19

Start at _____, then add _____ each time

5, 18, 21, 24, 27, 30

Start at _____, then add _____ each time

8, 13, 21, 27, 33, 38, 43

Start at _____, then add _____ each time

3, 13, 23, 33, 43, 53, 63, 73

Start at _____, then add _____ each time

6, 10, 14, 18, 22, 26, 30, 34

Start at _____, then add _____ each time

11, 14, 17, 20, 23, 26, 29, 32

Start at _____, then add _____ each time

Creating Rules

Questions

Write your own patterns using the pattern rule



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

Pattern Rule: Start at 2, add 2 each time

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

Pattern Rule: Start at _____, add 10 each time

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

Pattern Rule: Start at 5, add _____ each time

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

Pattern Rule: Start at 3, add 3 each time

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

Pattern Rule: Start at 4, add 4 each time

PREVIEW

Exit Cards

Cut Out

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

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

Name: _____

Write your own patterns using the pattern rule

1) _____, _____, _____, _____, _____

Pattern Rule: Start at 8, add 3 each time.

2) _____, _____, _____, _____, _____

Pattern Rule: Start at 0, add 5 each time.

3) _____, _____, _____, _____, _____

Pattern Rule: Start at 6, add 2 each time.

Input/Output Table – Addition



Rule: add 5	
In	Out
5	10
10	15
15	20
20	25



Questions 1-4 Complete the input/output tables below

In	Out
3	
5	
10	
15	

Rule: add 2	
In	Out
3	
7	
13	
20	

Rule: add 4	
In	Out
2	
10	
15	
21	

Rule: add 3	
In	Out
5	
10	
17	
22	

Rule: add 5	
In	Out
0	
5	
15	
25	

Rule: add 10	
In	Out
0	
10	
30	
40	

Input/Output Table – Addition



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 Problems - Halloween

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 |

Bill is trick-or-treating for Halloween. He leaves his house with 5 candies to start. He gets 2 candies for each house he visits. He visits 10 houses.

a) Draw the problem below.



b) How many total candies does he get?



Patterning Word Problems – 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 |

Tyler's hair is 10mm long in January. In February his hair is 58mm long.
In March his hair is 106mm long.

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

b) How long will his hair be in July?

PREVIEW



Patterning Word Problems - 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 is falling outside Rayna's house. She records the height of the snow each hour. After the 1st hour, it is 20cm. After the 2nd hour it is 28cm. After the 3rd hour it is 32cm.

- 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?

Exit Cards

Cut Out

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

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Name: _____

Sarah is building a tower with blocks. She starts with 3 blocks in the first level. Each next level, she adds 3 more blocks than the previous level. How many blocks are in the fourth level?

Activity Title: Pattern Treasure Hunt

Objective

What are we learning about?

To reinforce students' understanding of growing 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 treats (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.

Name: _____

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Instructions

Cut out the cards below

1) 2, 4, 6

2) 5, 10, 15

3) 1, 3, 5

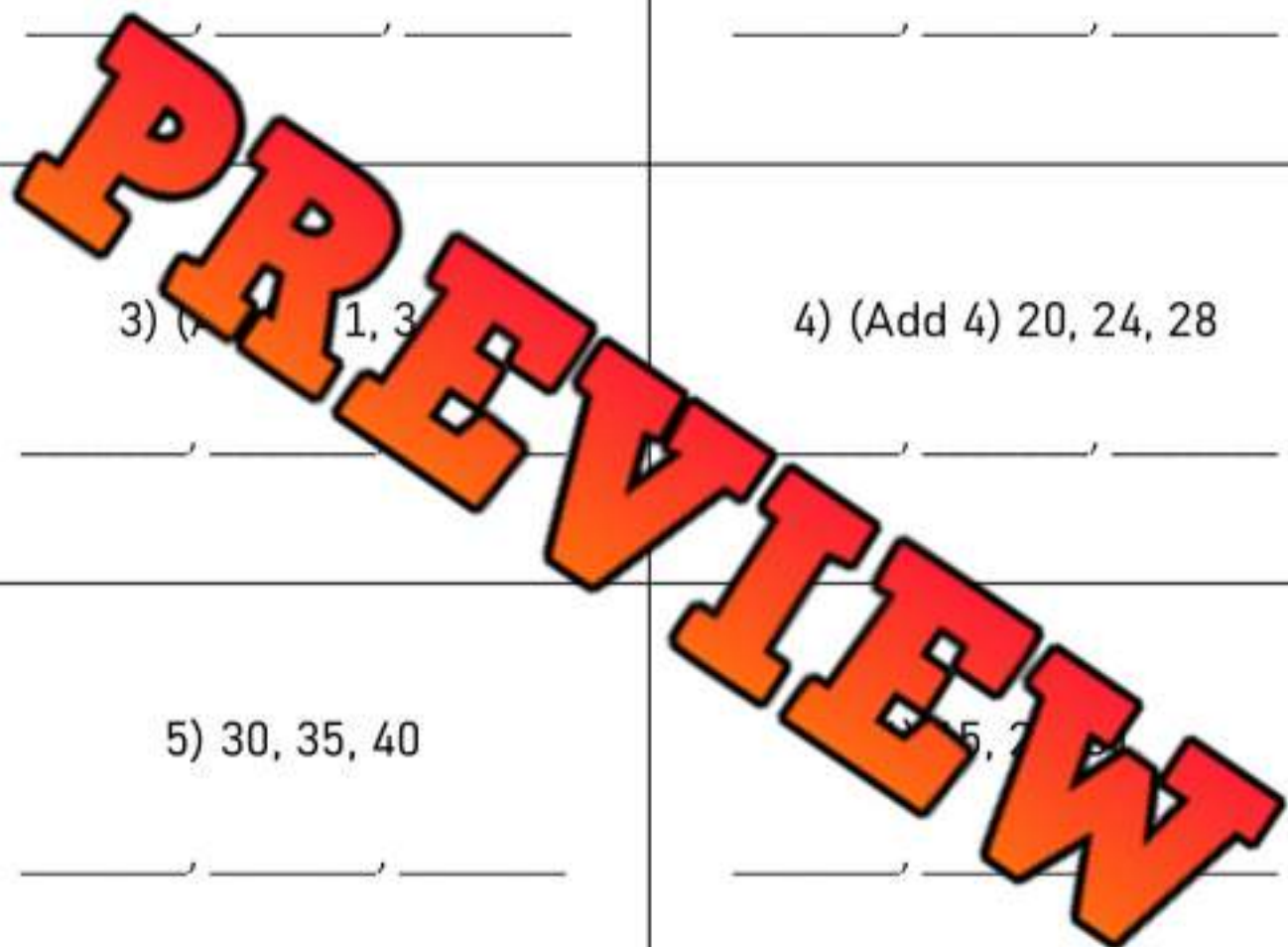
4) (Add 4) 20, 24, 28

5) 30, 35, 40

6) 5, 10, 15

7) Start at 4, add 4 each time.

8) Start at 80, add 5 each time:



Instructions

Cut out the cards below

9) A class collects 3 cans on Monday, 6 on Tuesday, and 9 on Wednesday. How many cans will they collect on Thursday if the pattern continues?

10) A factory makes 8 toys on the first day and 4 more each day. How many toys after 3 days?

11) (Add 3) 10, 2

_____ / _____ / _____

12) (Add 3) 18, 21, 24

_____ / _____ / _____

13) You start with 10 stickers and get 5 more each day. How many stickers will you have on day 4?

14) _____ has _____ birds. Each hour, 8 more birds are added. How many birds are there after 3 hours?

15) 8, 16, 24

_____ / _____ / _____

16) 25, 27, 29

_____ / _____ / _____

Instructions

Cut out the cards below

17) Kelly read 5 pages today. She plans to read 5 more pages each day. What day will she read 20 pages?

18) Add \$2 each week starting from \$7. What is the total after 4 weeks?

19) 1, 5, 9, 13, 17, 21, 25, 29, 33, 37, 41, 45, 49, 53, 57, 61, 65, 69, 73, 77, 81, 85, 89, 93, 97, 101, 105, 109, 113, 117, 121, 125, 129, 133, 137, 141, 145, 149, 153, 157, 161, 165, 169, 173, 177, 181, 185, 189, 193, 197, 201, 205, 209, 213, 217, 221, 225, 229, 233, 237, 241, 245, 249, 253, 257, 261, 265, 269, 273, 277, 281, 285, 289, 293, 297, 301, 305, 309, 313, 317, 321, 325, 329, 333, 337, 341, 345, 349, 353, 357, 361, 365, 369, 373, 377, 381, 385, 389, 393, 397, 401, 405, 409, 413, 417, 421, 425, 429, 433, 437, 441, 445, 449, 453, 457, 461, 465, 469, 473, 477, 481, 485, 489, 493, 497, 501, 505, 509, 513, 517, 521, 525, 529, 533, 537, 541, 545, 549, 553, 557, 561, 565, 569, 573, 577, 581, 585, 589, 593, 597, 601, 605, 609, 613, 617, 621, 625, 629, 633, 637, 641, 645, 649, 653, 657, 661, 665, 669, 673, 677, 681, 685, 689, 693, 697, 701, 705, 709, 713, 717, 721, 725, 729, 733, 737, 741, 745, 749, 753, 757, 761, 765, 769, 773, 777, 781, 785, 789, 793, 797, 801, 805, 809, 813, 817, 821, 825, 829, 833, 837, 841, 845, 849, 853, 857, 861, 865, 869, 873, 877, 881, 885, 889, 893, 897, 901, 905, 909, 913, 917, 921, 925, 929, 933, 937, 941, 945, 949, 953, 957, 961, 965, 969, 973, 977, 981, 985, 989, 993, 997, 1001

20) 64, 68, 72

21) Mia has 8 marbles. Her friend gives her 6 more marbles each day. How many marbles will she have on the 3rd day?

22) Begin with 5 and increase by 3 each time. Write the first three numbers.

23) (Add 10) 49, 59, 69

24) Begin with 22 and add 10 each time. What are the first 3 numbers?

Instructions

Cut out the cards below

25) Start with \$5, earn \$2 more each day. What is the total after 5 days?

26) Add 3 starting from 24.

_____, _____, _____

27) You plant 5 trees each year starting with 10 trees. How many trees will there be after 2 years?

28) (Add 5) 14, 19, 24

_____, _____, _____

29) A frog jumps 3 metres at a time. How far will it jump after 4 jumps?

30) A player scores 10 points in a game and scores 5 more points each round. How many points will they have after the 4th round?

31) A turtle crawls 4 metres every minute. How far will it crawl in 5 minutes?

32) A garden starts with 10 flowers. Each day, 4 new flowers bloom. How many total flowers are there after 6 days?

Patterning Quiz

Part 1

Continue the repeating patterns below by drawing 3 more pictures



Part 2

Write the pattern score and continue the pattern

1 1 2 3 1 1 2 3 _____, _____

3 6 2 2 2 3 6 2 2 2 _____, _____

7 7 4 4 5 7 7 4 4 5 _____, _____

Part 3

Follow the rule by adding to find the next number

1) (Add 5)

3, 8, 13, _____, _____, _____

2) (Add 3)

23, 26, 29, _____, _____, _____

3) (Add 6)

2, 8, 14, _____, _____, _____

4) (Add 3)

18, 21, 24, _____, _____, _____

5) (Add 2)

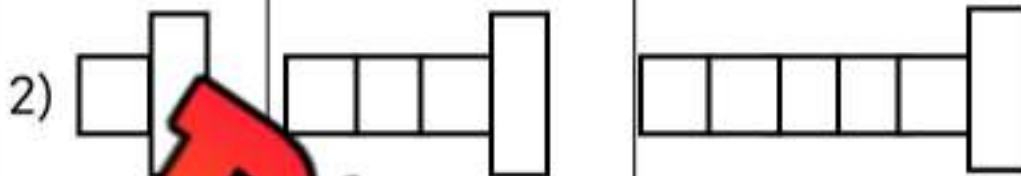
60, 62, 64, _____, _____, _____

6) (Add 7)

10, 17, 24, _____, _____, _____

Part 4

Draw the last part of the pattern



Part 5

Solve the word problem below. Show your work.

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

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

Grade 2

Variables and Equations

Change in Quantity using pictorial and symbolic representation:

- numerically describing a change in quantity (e.g., for $6 + n = 10$, visualize the change in quantity by using ten-frames, hundred charts, etc.)

symbolic representation of equality and inequality

Balance Pan Equations

Questions

How many ways can you balance the equation to equal 6

1)

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

2)

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

3)

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

4)

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

Balance Pan Equations

Questions

How many ways can you balance the equation to equal 7

1)

10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10



$$\underline{\quad} + \underline{\quad} = 7$$

2)

10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10



$$\underline{\quad} + \underline{\quad} = 7$$

3)

10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10



$$\underline{\quad} + \underline{\quad} = 7$$

4)

10 9 8 7 6 5 4 3 2 1 0 1 2 3 4 5 6 7 8 9 10



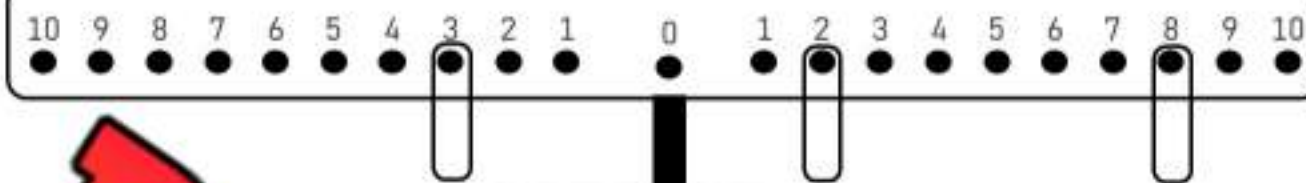
$$\underline{\quad} + \underline{\quad} = 7$$

Balance Pan Equations

Questions

Balance the equations below

1)



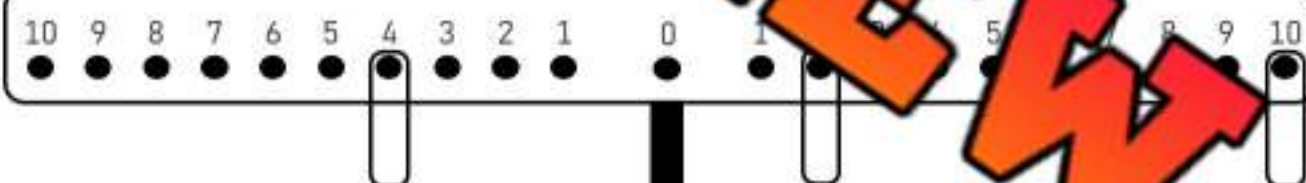
$$3 + \underline{\quad} = 2 + 8$$

2)



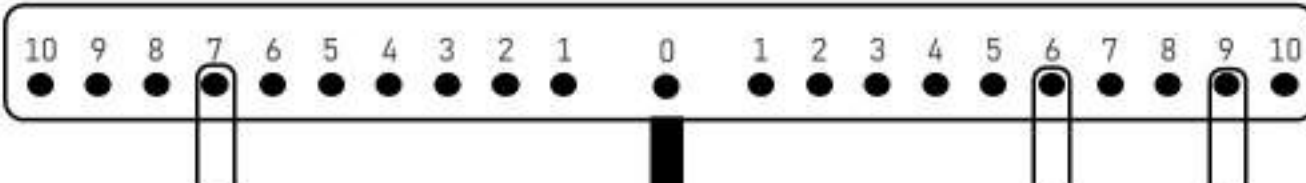
$$2 + \underline{\quad} + \underline{\quad}$$

3)



$$4 + \underline{\quad} = 2 + 10$$

4)



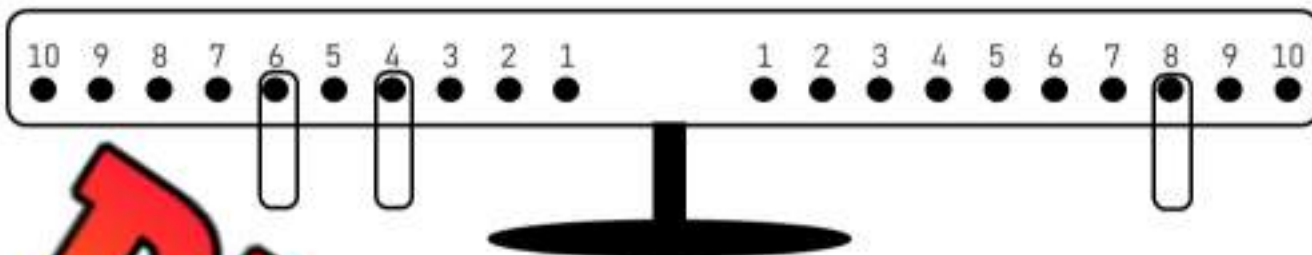
$$7 + \underline{\quad} = 6 + 9$$

Balance Pan Equations

Questions

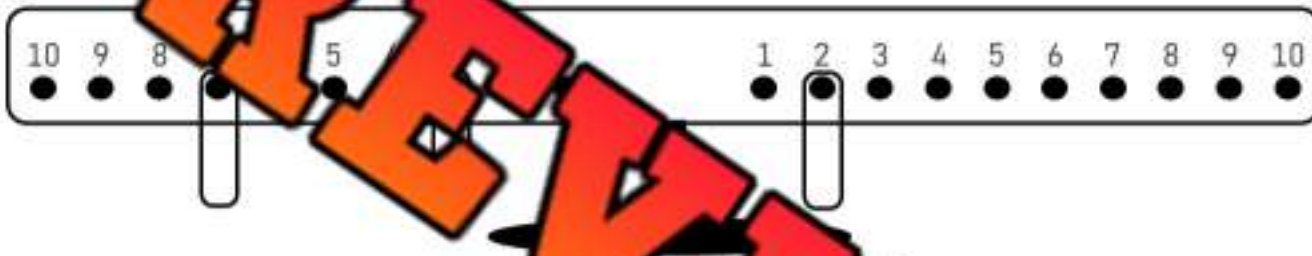
Balance the equations below

1)



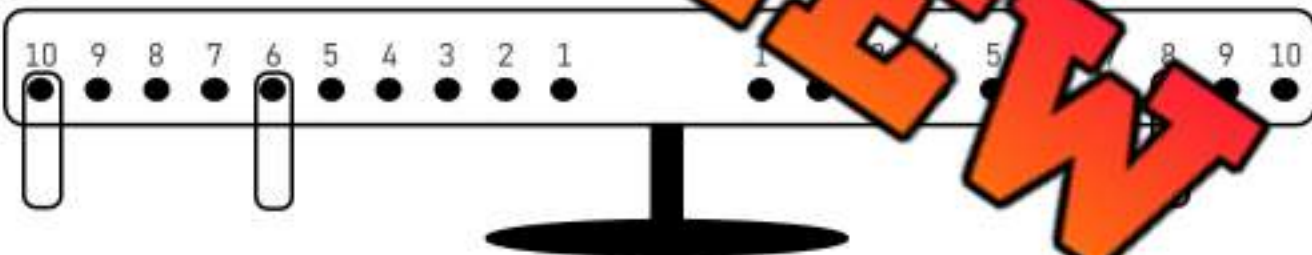
$$6 + 4 = \underline{\quad} + 8$$

2)



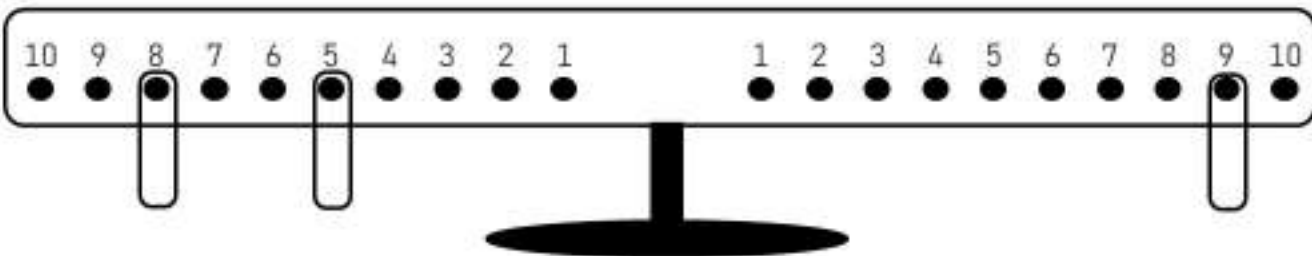
$$7 + 5 = 2 + \underline{\quad}$$

3)



$$10 + 6 = \underline{\quad} + 8$$

4)



$$8 + 5 = 9 + \underline{\quad}$$

Pre-Algebra – Balancing Addition Equations

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

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



3	+	6	=	9
---	---	---	---	---

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



8	+		=	11
---	---	--	---	----



6	+		=	
---	---	--	---	--



8	+		=	14
---	---	--	---	----



5	+		=	9
---	---	--	---	---



7	+		=	12
---	---	--	---	----



2	+		=	13
---	---	--	---	----



6	+		=	10
---	---	--	---	----



3	+		=	14
---	---	--	---	----



1	+		=	12
---	---	--	---	----

Pre-Algebra – Balancing Addition Equations

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

Examples:

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

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

Questions

Fill in the missing number to balance the equation

1) 4



+

3

+

6

=

3) 4



+

5

=

4) 1



+

=

8



5) 6

+

4

=

10



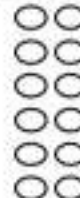
6) 4



+

=

12



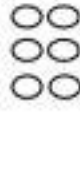
7)

+

6

=

10



8)

+

7

=

14



9)

+

5

=

11



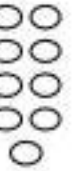
10)

+

2

=

9

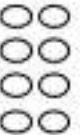


11) 3

+

=

8

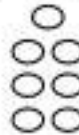


12) 6

+

7

=



13)

+

6

=

16

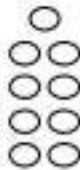


14) 7

+

=

9

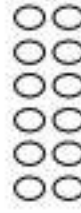


15) 3

+

12

=



Pre-Algebra – Balancing Addition Equations

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

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

Examples:

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

Questions

Fill in the missing number to balance the equation

1) $6 + \boxed{} = \boxed{}$

2) $2 + 6 = \boxed{}$

3) $4 + 6 = \boxed{}$

4) $3 + \boxed{} = 8$

5) $1 + \boxed{} = 10$

6) $12 + \boxed{} = 15$

7) $\boxed{} + 6 = 10$

8) $\boxed{} + 5 = 10$

9) $\boxed{} + 15 = 20$

10) $14 + 4 = \boxed{}$

11) $12 + \boxed{} = 17$

12) $10 + \boxed{} = 14$

13) $17 + \boxed{} = 25$

14) $20 + 7 = \boxed{}$

15) $23 + \boxed{} = 30$

16) $16 + \boxed{} = 24$

17) $21 + 7 = \boxed{}$

18) $30 + \boxed{} = 36$

19) $40 + \boxed{} = 48$

20) $43 + 10 = \boxed{}$

21) $47 + \boxed{} = 51$

Making Tens – Changing Variables

When we make tens, we are using a variable. The ten is the constant and the number we use to add to 10 is the variable.

Questions

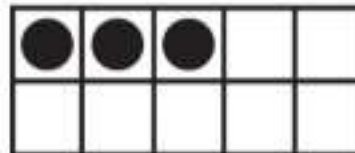
How many more dots do you need to add to make 10?

1)



$$8 + \underline{\quad} = 10$$

2)



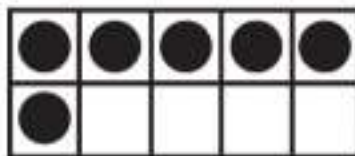
$$3 + \underline{\quad} = 10$$

3)



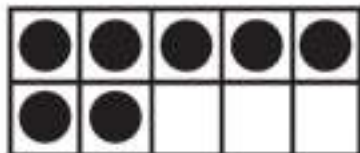
$$2 + \underline{\quad} = 10$$

4)



$$6 + \underline{\quad} = 10$$

5)



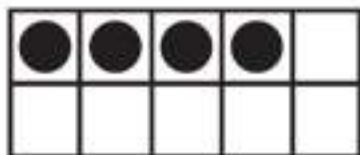
$$7 + \underline{\quad} = 10$$

6)



$$9 + \underline{\quad} = 10$$

7)



$$4 + \underline{\quad} = 10$$

8)



$$1 + \underline{\quad} = 10$$

9)



$$5 + \underline{\quad} = 10$$

10)



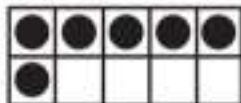
$$10 + \underline{\quad} = 10$$

Making 20 – Changing Variables

Questions

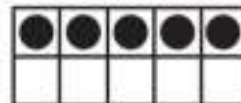
How many more dots do you need to add to make 20?

1)



$$\underline{\quad} = 20$$

2)



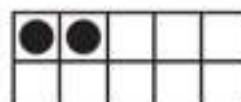
$$15 + \underline{\quad} = 20$$

3)



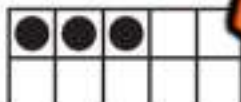
$$10 + \underline{\quad} = 20$$

4)



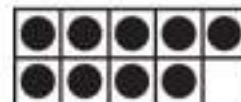
$$12 + \underline{\quad} = 20$$

5)



$$13 + \underline{\quad} = 20$$

6)



$$\underline{\quad} = 20$$

7)



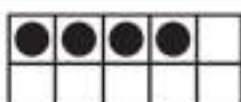
$$18 + \underline{\quad} = 20$$

8)



$$11 + \underline{\quad} = 20$$

9)



$$14 + \underline{\quad} = 20$$

10)



$$17 + \underline{\quad} = 20$$

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.

Jeopardy Questions

Ask students the questions below

\$100	\$200	\$300	\$400	\$500
$_ + 2 = 7$	$_ + 3 = 6$	$10 + _ = 20$	$3 + _ = 12$	$4 + _ + 3 = 10$
$_ + 15 = 25$	$_ + 12 = 32$	$20 + _ = 53$	$_ + 15 = 40$	$40 + 25 + _ = 100$
Balance the equation: $1 + _ = 1 + 2$	Balance the equation: $2 + _ = 2 + 4$	Balance the equation: $5 + 2 = _ + 4$	Balance the equation: $6 + 4 = _ + 7$	Balance the equation: $8 + 6 = _ + 10$
Balance the equation: $2 + 2 = 1 + _$	Balance the equation: $3 + 4 = 5 + _$	Balance the equation: $10 + 3 = _ + 7$	Balance the equation: $9 + 2 + _ = 8 + 11$	Balance the equation: $_ + 10 = 12 + _$
Emily had 5 books. She received some more and now has 12 books. How many books did she receive?	David had 10 Legos. He received some more and now has 22 Legos. How many Legos did he receive?	Ethan had 21 rocks. He found some more and now has 28 rocks. How many rocks did he find?	Emma had 10 marbles. She received some more and now has 30 marbles. How many marbles did she start with?	Emma has some seeds. She then buys 7 seeds from one store and 14 from another. She now has 28 seeds. How many seeds did she start with?
John had 3 apples. He bought some more and now has 10 apples. How many apples did he buy?	Emma had 9 pencils. She bought some more and now has 16 pencils. How many pencils did she buy?	Sarah has some apples. She buys 6 more and now has 15 apples. How many apples did she start with?	Kevin has some stickers. He then gets 8 stickers, then 3 more, and now has 18 stickers. How many stickers did he start with?	Sophia has some coins. She then finds 5 coins, then 6 more, and now has 28 coins. How many coins did she start with?

Addition to 20 – Are They Equal?

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



$5 + 3 = 8$

$8 + 4 \neq 13$

$14 + 6 = 20$

Questions

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

1) $5 + 3 = 8$	2) $4 + 4 = 8$	3) $3 + 3 = 5$
4) $4 + 6 = 11$	5) $7 + 3 = 10$	6) $3 + 5 = 8$
7) $9 + 3 = 13$	8) $7 + 5 = 12$	9) $9 + 7 = 16$
10) $8 + 4 = 13$	11) $11 + 5 = 16$	12) $8 + 7 = 15$
13) $10 + 10 = 19$	14) $8 + 10 = 18$	15) $13 + 6 = 19$
16) $13 + 3 = 17$	17) $11 + 6 = 18$	18) $14 + 6 = 20$

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) $5 + 5 =$	2) $17 + 4 = 21$	3) $23 + 7 = 29$
4) $21 + 6 = 27$	5) $2 + 31 =$	6) $23 + 10 = 33$
7) $19 + 6 = 26$	8) $26 + 5 = 31$	9) $29 + 7 = 46$
10) $58 + 6 = 66$	11) $61 + 5 = 66$	12) $7 + 90 =$
13) $60 + 10 = 70$	14) $81 + 0 = 81$	15) $84 + 3 = 88$
16) $90 + 7 = 96$	17) $94 + 5 = 99$	18) $87 + 10 = 97$

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) $7 + 3 = 5 + 7$	7) $6 + 3 = 2 + 5$
2) $7 + 3 = 5 + 7$	$6 + 5 = 4 + 8$
3) $8 + 5 = 4 + 7$	8) $7 + 1 = 1 + 9$
4) $7 + 7 = 5 + 8$	10) $9 + 3 = 7 + 4$
5) $14 + 2 = 11 + 5$	11) $16 + 3 = 14 + 5$
6) $23 + 4 = 20 + 7$	12) $30 + 5 = 33 + 3$

Exit Cards

Cut Out

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

Name: _____

Put a slash (\neq) through the equal sign if the equations are not balanced.

a) $12 + 3 = 15$

b) $20 + 6 = 25 + 10$

c) $25 + 10 = 30 + 5$

d) $30 + 2 = 29 + 4$

Name: _____

Put a slash (\neq) through the equal sign if the equations are not balanced.

a) $12 + 3 = 15 + 0$

b) $20 + 6 = 25 + 10$

c) $25 + 10 = 30 + 5$

d) $30 + 2 = 29 + 4$

Name: _____

Put a slash (\neq) through the equal sign if the equations are not balanced.

a) $12 + 3 = 15 + 0$

b) $20 + 6 = 25 + 10$

c) $25 + 10 = 30 + 5$

d) $30 + 2 = 29 + 4$

Name: _____

Put a slash (\neq) through the equal sign if the equations are not balanced.

a) $12 + 3 = 15 + 0$

b) $20 + 6 = 25 + 10$

c) $25 + 10 = 30 + 5$

d) $30 + 2 = 29 + 4$

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

2) $9 + \underline{\quad} = 15$

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

4) $9 + \underline{\quad} = 20$

5) $14 + \underline{\quad} = 19$

6) $10 + \underline{\quad} = 20$

7) $11 + \underline{\quad} = 23$

8) $17 + \underline{\quad} =$

9) $13 + \underline{\quad} = 20$

10) $22 + \underline{\quad} = 30$

11) $19 + \underline{\quad} = 30$

12) $22 + \underline{\quad} = 35$

13) $31 + \underline{\quad} = 45$

14) $38 + \underline{\quad} = 50$

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) _____ + 6 = 12

3) _____ + 8 =

_____ + 10 = 18

5) _____ + 7 = 16

6) _____ + 14 =

7) _____ + 9 = 20

8) _____ + _____ =

9) _____ + 12 = 24

10) _____ + 14 = 18

11) _____ + 15 = 35

12) _____ + 21 = 30

13) _____ + 20 = 40

14) _____ + 45 = 50

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) $5 + 2$

$6 + 2$

$4 + 3$

2) $6 + 3$

$5 + 5$

$2 + 8$

3) $8 + 4$

$7 + 7$

$6 + 6$

4) $5 + 8$

$4 + 7$

5) $8 + 2$

$7 + 3$

$5 + 6$

6) $10 + 3$

$8 + 5$

$6 + 6$

7) $3 + 6$

$4 + 7$

$8 + 1$

Addition – Which Equation Doesn't Belong?

Two of the equations equal the same. One of the equations does not belong!

Example

$$4 + 3 \quad 5 + 1 \quad 2 + 5$$



Questions Circle the equation that doesn't belong!

1)

$4 + 4$

$3 + 7$

$2 + 9$

2)

$7 + 2$

$4 + 7$

$9 + 3$

3)

$2 + 3$

$5 + 9$

$4 + 2$

4)

$3 + 8$

$7 + 7$

5)

$8 + 4$

$6 + 9$

$10 + 5$

6)

$12 + 3$

$10 + 5$

$8 + 6$

7)

$7 + 4$

$10 + 2$

$8 + 3$

Finding the Missing Information – To 20

Find out how many coins are in the bag using the information given to you.

Example

There are 9 coins in total and 5 outside of the bag.

Therefore, there are 4 in the bag

$$5 + 4 = 9$$



Instructions How many coins are in the bags below?

1)

7



Answer: _____

2)

10



Answer: _____

3)

12



Answer: _____

15



Answer: _____

5)

17



Answer: _____

6)

20



Answer: _____

Finding the Missing Information – To 30**Instructions**

How many coins are in the bags below?

1)  15

Answer: _____

2)  17

Answer: _____

2)  22

Answer: _____

4)  24

Answer: _____

5)  25

Answer: _____

 27

Answer: _____

7)  20

Answer: _____

8)  30

Answer: _____

Word Problems – Writing Addition Equations

Questions

Answer the questions below

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

$$j + 8 = 18$$

$$8 + 18 = j$$

$$8 + j = 18$$

$$8 - j = 18$$



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

$$20 + j = 50$$

$$50 + c = 20$$

$$20 + c = 50$$

$$c - 20 = 50$$



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

$$c + 25 = 50$$

$$25 + c = 50$$

$$25 + c = 50$$

$$25 + 50 = c$$



4) Adam and Henry went Trick or Treating. Henry got 62 candies. How many candies did Adam get? Which equation will tell us how many candies Adam got?

$$62 + c = 121$$

$$62 + 121 = c$$

$$c + 62 = 121$$

$$62 - c = 121$$



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

$$p + 5 = 15$$

$$5 + 15 = p$$

$$5 - p = 15$$

$$5 + p = 15$$

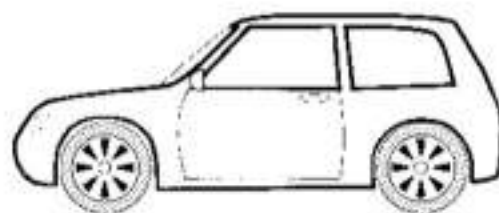


Word Problems – Solving Addition Equations

Questions

Answer the questions below

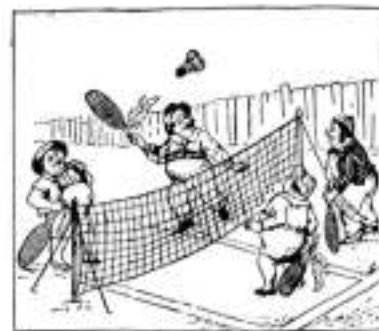
1) Tim drove 20km to get to work. Then he drove to the store. When he got to the store, he had driven 28 km in total. How many km did he drive to the store?



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

Bonus – He had 75 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.



$$7 - 4 = 3$$

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



$$11 - \square = 8$$



$$8 - \square = 10$$



$$10 - \square = 4$$



$$8 - \square = 1$$



$$11 - \square = 3$$



$$13 - \square = 2$$



$$10 - \square = 4$$



$$14 - \square = 1$$



$$4 - \square = 0$$

Pre-Algebra – Balancing Subtraction Equations

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

Examples:

$$\begin{array}{c} 3 \\ \wedge \\ 7 - 4 = \boxed{3} \end{array}$$

$$\begin{array}{c} 8 \\ \wedge \\ 14 - 6 = \boxed{8} \end{array}$$

Questions

Fill in the missing numbers to balance the equations

1) 4



$$- \boxed{} =$$

2) 3 - 2 =



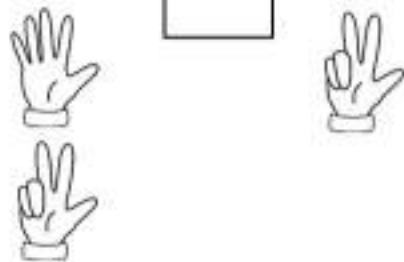
$$= \boxed{}$$

3) 5 - 5 =



$$= \boxed{}$$

4) 8 - $\boxed{}$ = 3



5) $\boxed{}$ - 2 =



6) 10 - $\boxed{}$ = 6



7) $\boxed{}$ - 6 = 2



8) $\boxed{}$ - 7 = 4



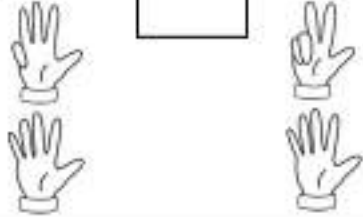
9) $\boxed{}$ - 10 =



10) $\boxed{}$ - 2 = 9



11) 9 - $\boxed{}$ = 8



12) 6 - 2 = $\boxed{}$



Pre-Algebra – Result Unknown

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

Examples:

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

$$\begin{array}{c} 6 \\ \wedge \\ 24 - 18 = 6 \end{array}$$

Question: Find the missing number to balance the equation

1) $17 - 8 = \underline{\quad}$

2) $15 - 9 = \underline{\quad}$

3) $12 - 7 = \underline{\quad}$

4) $13 - \underline{\quad} = 6$

5) $21 - 11 = \underline{\quad}$

6) $30 - \underline{\quad} = 15$

7) $26 - 5 = \underline{\quad}$

8) $33 - 5 = \underline{\quad}$

9) $39 - 10 = \underline{\quad}$

10) $40 - 20 = \underline{\quad}$

11) $35 - 15 = \underline{\quad}$

12) $45 - 10 = \underline{\quad}$

13) $48 - 6 = \underline{\quad}$

14) $50 - 25 = \underline{\quad}$

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) $10 - \underline{\quad} = 4$

2) $9 - \underline{\quad} = 4$

3) $12 - \underline{\quad} = 3$

4) $11 - \underline{\quad} = 9$

5) $13 - \underline{\quad} = 6$

6) $18 - \underline{\quad} = 11$

7) $21 - \underline{\quad} = 14$

8) $24 - \underline{\quad} = 18$

9) $26 - \underline{\quad} = 19$

10) $32 - \underline{\quad} = 20$

11) $35 - \underline{\quad} = 29$

12) $48 - \underline{\quad} = 28$

13) $45 - \underline{\quad} = 41$

14) $50 - \underline{\quad} = 41$

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 = 9

3) _____ - 6 = 10

4) _____ - 3 = 8

5) _____ - 7 = 14

6) _____ - 6 = 3

7) _____ - 5 = 15

8) _____ - 5 = _____

9) _____ - 6 = 23

10) _____ - 6 = 25

11) _____ - 7 = 22

12) _____ - 10 = 35

13) _____ - 10 = 33

14) _____ - 15 = 35

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 need for the activity.

- Pre-prepared addition and subtraction 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.



$12 + 8$

$10 + 10$

$25 - 5$

$18 + 22$

$22 + 20$

$40 - 5$

$30 +$

$20 + 12$

$10 + 22$

PREVIEW

$45 + 15$

$30 + 30$

PREVIEW

$60 + 10$

$55 + 5$

$40 + 15$

$90 - 40$

$50 +$

$65 + 10$

$50 + 25$

Using Variables to Solve Subtraction Equations

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

$$\begin{aligned} a - b &= c \\ 7 - 4 &= c \\ c &= 3 \end{aligned}$$

$$a = 7$$

$$b = 4$$



Question

Find out the value of the variable

$a - b = c$ $a = 7$ $b = 2$ _____ - _____ = c $c =$	$e - n = f$ $e = 10$ $n = 5$ _____ - _____ = f $f =$
$r - y = k$ $r = 8$ $y = 2$ _____ - _____ = k $k =$	$g = h$ $t = 9$ $g = 6$ _____ - _____ = h $h =$
$a - b = c$ $a = 10$ $b = 8$ _____ - _____ = c $c =$	$e - n = f$ $e = 12$ $n = 6$ _____ - _____ = f $f =$
$r - y = k$ $r = 15$ $y = 4$ _____ - _____ = k $k =$	$t - g = h$ $t = 12$ $g = 8$ _____ - _____ = h $h =$
$a - b = c$ $a = 18$ $b = 5$ _____ - _____ = c $c =$	$e - n = f$ $e = 22$ $n = 7$ _____ - _____ = f $f =$
$r - y = k$ $r = 27$ $y = 5$ _____ - _____ = k $k =$	$t - g = h$ $t = 29$ $g = 4$ _____ - _____ = h $h =$

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) Ken and his friends were having a fire. They had 18 logs for the fire. After the fire, they had 4 left. Which equation tells us how many logs they burned?

$$b - 4 = 18$$

$$18 - 4 = b$$

$$18 - b = 4$$

$$4 - b = 18$$



3) Tom collected 73 shells on the beach. He gave some to his sister. Now he has 60 shells left. Which equation tells us how many shells Tom gave to his sister?

$$73 - s = 60$$

$$s - 60 = 73$$

$$s - 60 = 73$$

$$73 - s = 60$$

4) Courtney saved 75 dollars. She bought a new sweater. She has 45 dollars left. 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?

$$m - 31 = 93$$

$$93 - 31 = m$$

$$31 + m = 93$$

$$31 - m = 93$$



Word Problems – Solving Subtraction Equations

Questions

Answer the questions below

1) Mrs. Wilson had 20 pencils at the start of the school year. She gave all the kids in her class 1 pencil. She now has 3 pencils. How many students are in Mrs. Wilson's class?



2) Hudson saved 40 dollars and bought a new toy for 15 dollars. How many dollars does he have left?



Bonus: He saved 15 more dollars. Can he buy a toy that costs 40 dollars?

3) The grade 2 class planted 42 tomato seeds but only 36 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 solutions.
4. Encourage teamwork by having students collaborate on their partner's work 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:

$$25 - x = 20$$

solve for x

- a) 1 b) 3 c) 4

Card 2:

$$50 - \bullet = 30$$

solve for \bullet

- a) 20 b) 15 c) 10

Card 4:

$$35 - \bullet = 28$$

solve for \bullet

- a) 6 b) 7 c) 5

Card 5:

$$12 - n = 9$$

solve for n

- a) 2 b) 3 c) 4

Card 6:

$$70 - m = 55$$

solve for m

- a) 15 b) 17 c) 14

Card 7:

Sara has 32 apples. She gets some more and now has 50. How many did she get?

- a) 18 b) 20 c) 22

Card 8:

Ben had 40 marbles. He lost some marbles and now has 25. How many did he lose?

- a) 12 b) 14 c) 15

Task Cards

Cut out the task cards below

Card 17:

$$25 + e = 55$$

solve for e

- a) 30 b) 32 c) 28

Card 18:

$$70 - f = 40$$

solve for f

- a) 35 b) 28 c) 30

Card 20:

Sam has 50 candies. He gets some more candies and now has 70. How many did he get?

- a) 25 b) 30 c) 28

Emma had 50 candies. She lost some candies and now has 30. How many did she lose?

- a) 20 b) 18 c) 22

Card 21:

A balloon was 10 inches. It expanded by ___ inches and is now 40 inches. How much did it expand?

- a) 30 b) 28 c) 32

Card 22:

Anna had 20 cookies. She ate 5 cookies and now has 50. How many did she eat?

- a) 25 b) 30 c) 28

Card 23:

$$100 - k = 60$$

solve for k

- a) 40 b) 35 c) 50

Card 24:

$$19 + l = 40$$

solve for l

- a) 21 b) 22 c) 20

Name: _____

153

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

Variables and Equations – Unit Quiz

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

1) $5 + 10 = 15$	2) $10 + 6 = 12$	3) $15 + 10 = 25$
4) $10 + 5 = 15$	5) $18 + 6 = 24$	6) $19 + 5 = 24$
7) $5 - 5 = 0$	8) $10 - 4 = 6$	9) $16 - 5 = 11$
10) $21 - 6 = 15$	11) $10 - 4 = 6$	12) $28 - 5 = 22$

Part 2

Circle the equation that matches the solution

1)	$7 - 2$	$8 - 1$	
2)	$11 - 4$	$7 - 0$	$10 - 4$
3)	$8 + 6$	$9 + 5$	$10 + 5$
4)	$11 + 6$	$9 + 9$	$7 + 10$

Part 3

How many coins are in the bags below?

1)

9



Answer: _____

2)

12



Answer: _____

3)

15



Answer: _____

4)

20



Answer: _____

Part 4

Circle the equation that doesn't work.

1)

$4 + 6$

3)

$2 + 9$

2)

$9 - 5$

$12 - 7$

Part 5

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

Alexa saved 27 dollars from her allowance. She was given some money from her grandmother for her birthday. She now has 40 dollars. How much did her grandmother give her?