



# Preview – Information



Thank you for your interest in this product. Within this preview, you will see:

- ✓ A selection of Ready-To-Use Google Slides Lessons.
- ✓ A selection of worksheets included in the workbook.

When you make a purchase, you will receive a folder that contains the .pdf workbook file and a link to where you can make a copy of the Google Slides Lessons unit to your Google Drive.

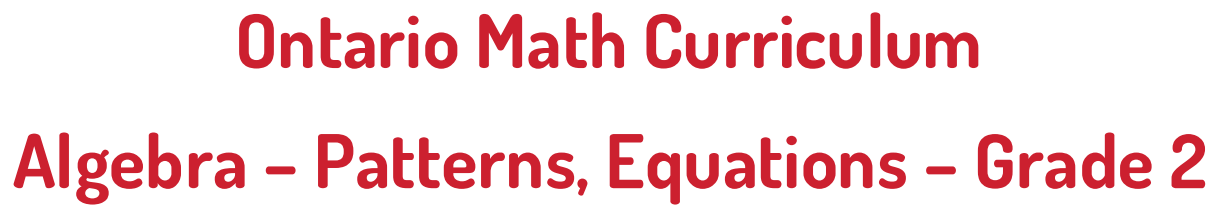
Thank you for shopping with us. Please let us know if you have any questions at:

[rob@supersimplesheets.com](mailto:rob@supersimplesheets.com)





















































# Google Slides Lessons Preview


















### Repeating Patterns - Pattern Core

Circle the pattern core and continue the repeating pattern by dragging the shapes.

1)	         
2)	         
3)	         
4)	         
5)	         





# Ontario Math Curriculum

## Algebra – Patterns, Equations – Grade 2

### Creating Repeating Patterns - Changing Directions

Drag the shapes from the shape bank to create repeating patterns with changing directions.

1)		
2)		
3)		
4)		
5)		

**SHAPE BANK**

### Creating Repeating Patterns - Animal Colour

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

1)								
2)								
3)								
4)								

**SHAPE BANK**

### Repeating Patterns

Drag the textures from the texture bank to create repeating patterns of your own choice and colours.

1									
2									

**TEXTURE BANK**





# Ontario Math Curriculum

## Algebra – Patterns, Equations – Grade 2

### Increasing Patterns - Shapes

Drag the blocks to draw the next figure in the pattern (by adding two blocks).  
Use the red block to highlight the newly added blocks.

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

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 Number Patterns 1 - 20

Drag the numbers to extend the patterns below.

1 2 3 4 5 6 7 8 9 0

1 3 5 7 9

2 4 6 8 10



# Workbook Preview



**Grade 2**  
**C1. Patterns and Relationships**

	Curriculum Expectations	Pages
<b>C1.1</b>	identify and describe a variety of patterns involving geometric designs, including patterns found in real-life contexts	5 - 56
<b>C1.2</b>	<b>Preview of 120 pages from this product that contains 358 pages total.</b>	
<b>C1.3</b>	determine pattern rules and use them to extend patterns, make and justify predictions, and identify missing elements in patterns represented with shapes and numbers	57 - 116
<b>C1.4</b>	create and describe patterns to illustrate relationships among whole numbers up to 100	7, 11 - 13, 84 - 103, 105 - 116



Name: \_\_\_\_\_

6

Curriculum Connection  
C1.1, C1.2

# Repeating Patterns

Questions

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

									
A		B	A	A	A	B	A		
									
									
									
									
									

Name: \_\_\_\_\_

7





































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

## Repeating Pattern Cores – 2 Elements

### Part 1

Core = Part that repeats – Circle the pattern core

**PREVIEW**

### Part 2

Create A/B patterns below that have different elements

_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

## 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) 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

- 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: \_\_\_\_\_

10

Curriculum Connection  
C1.1, C1.2

## Repeating A/B Patterns

### Questions

Label the A/B patterns below and then extend the pattern

A			D	A	A	B	C	D	A

## Repeating A/B Patterns

## Part 1

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

1) 

2)       

3) 

4) 

## Part 2

Create patterns that use the given A/B pattern

1)

A	B	B	A	B	B	A	B	B
---	---	---	---	---	---	---	---	---

2)

A      A      B      C      A      A      B      C      A















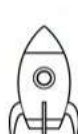

















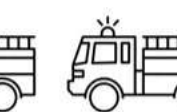


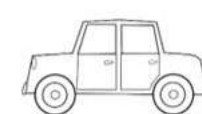
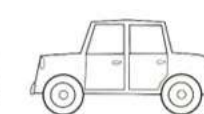






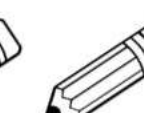

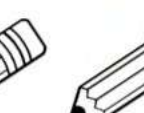


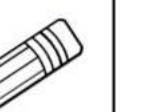


















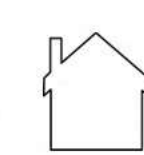
3)

A	B	C	A	A	B	C	A	A
---	---	---	---	---	---	---	---	---

# Creating Repeating Patterns - Colours

**Questions**

Colour the shapes below in different colours by creating a pattern

1)	       
2)	     
3)	           
4)	       
5)	     
6)	        
7)	          
8)	       



Name: \_\_\_\_\_

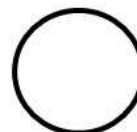
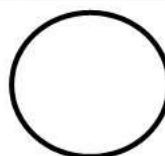
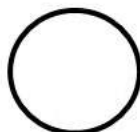
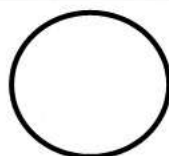
17

Curriculum Connection  
C1.1, C1.2

## Creating Repeating Patterns – Shape Size

### Questions

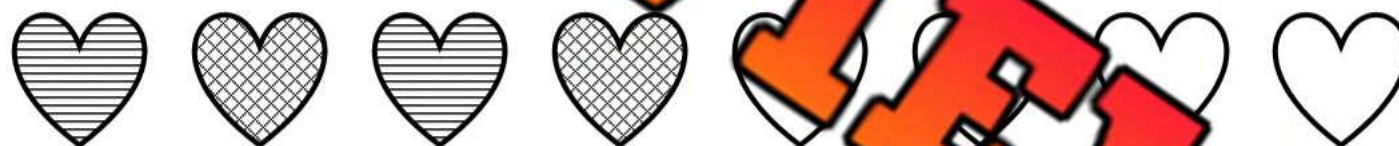
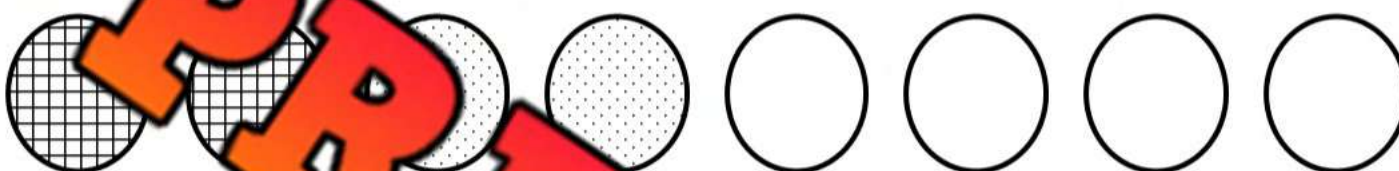
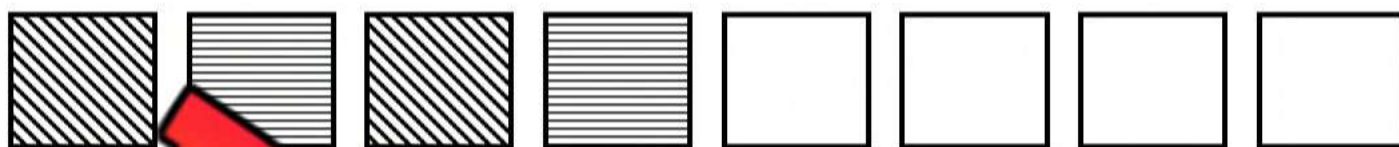
Write big, small or medium under the shapes depending on their size



# Extending Repeating Patterns - Texture

**Questions**

Extend the pattern by looking for a pattern in the textures





## Activity Title: Sound Clap Patterns

### Objective

What are we learning about?

Students will create and recognize patterns using clapping and other sounds. This activity helps students understand and identify patterns through a fun and interactive method.



Materials: What do you need for the activity.

- None

### Instructions

How you will complete it

1. Begin by explaining to the students that they will create patterns using clapping and other sounds, like snap or stomp.
2. Demonstrate a simple pattern, such as "clap, clap, snap, clap," and have the students repeat it.
3. Divide the students into small groups and ask each group to come up with their own unique sound pattern.
4. Allow each group to perform their pattern in front of the class.
5. After each performance, ask the rest of the class to identify and extend the pattern. For example, if the pattern is "clap, clap, snap, clap," the next part could be "clap, clap, snap, clap, clap, clap, snap, clap."
6. Repeat the process with each group, encouraging creativity and variation in the patterns they create.



**Reflection**

Answer the questions below.

1) Describe your pattern below.

---

---

---

2) Describe the pattern of another group.

---

---

---

3) Translate the pattern you made into shapes. For example, if the pattern was clap, clap, snap, clap, clap, then you could do square, square, circle, square, square, circle.

4) Translate the pattern another group made.

---

---

---

---

---

---

---

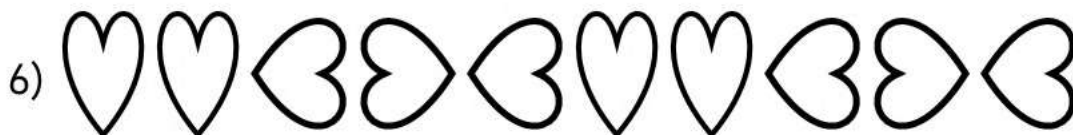
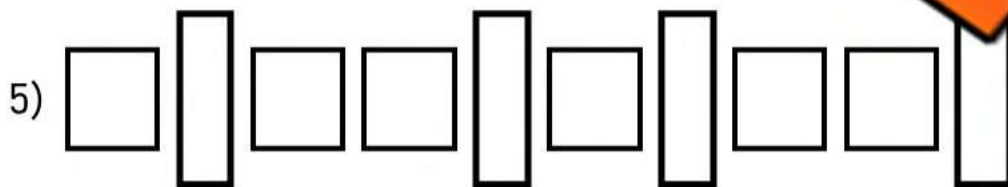
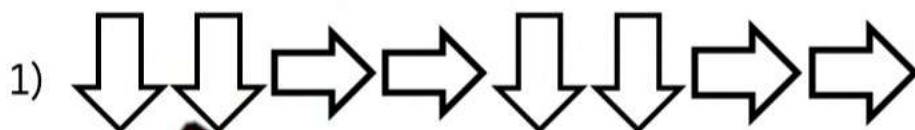
---

---

---

**Extending Repeating Patterns – Changing Directions****Questions**

Continue the repeating patterns below with three more shapes



## Creating Repeating Patterns – Changing Directions

### Questions

Use the shapes to create a pattern with changing directions

1)



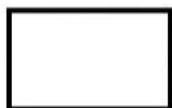
2)



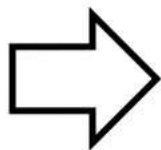
3)



4)



5)



6)



7)





## Extending Repeating Patterns - Letters

**Questions**

Continue the pattern below by writing more letters

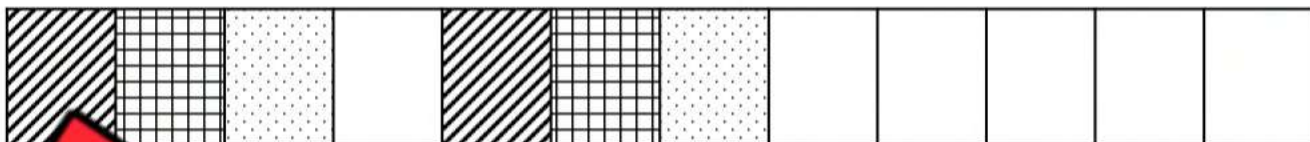
1)	A		B	A	A	B	A	A			
2)			P	R	S		P	R	S		
3)	S	N	E		S	E		S	N		
4)	E		L	P	E	L		E	L		
5)	Y			B	L	Y	S	B	B		
6)	A		A	C	A	B	A	C		B	
7)	P		K		P	E	K	E		E	

# Repeating Patterns - Bracelets

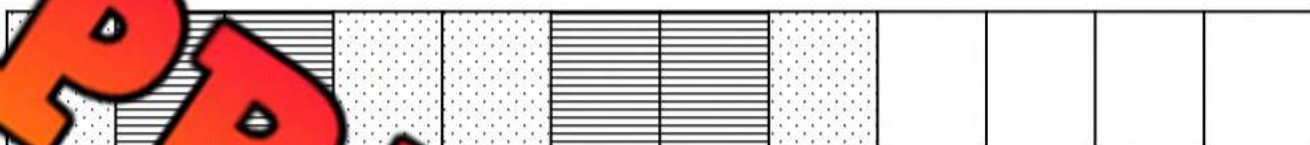
**Questions**

Draw the repeating patterns on the bracelets

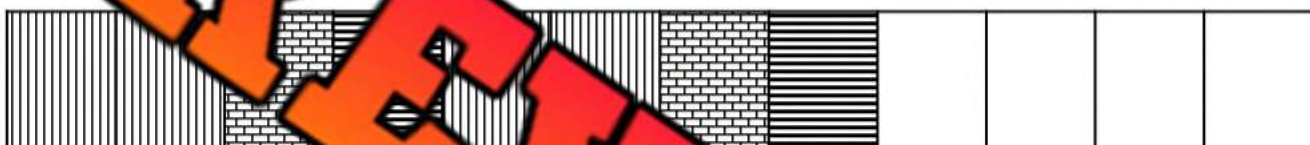
1)



2)



3)



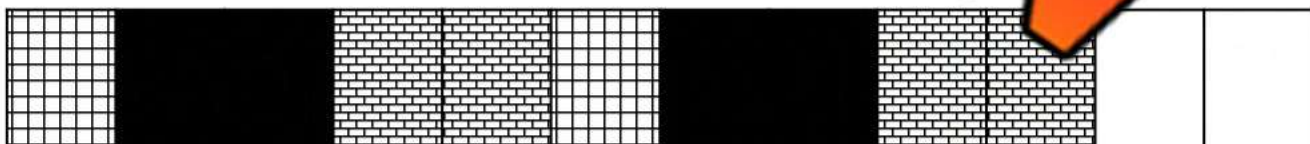
4)



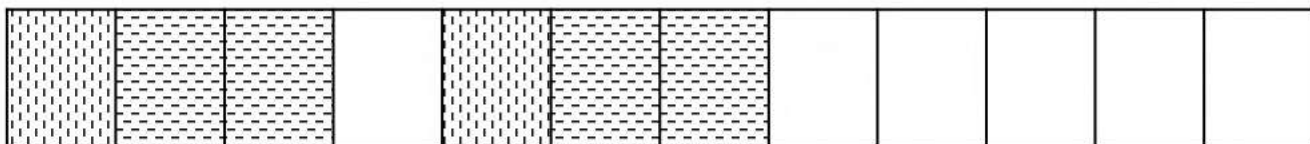
5)



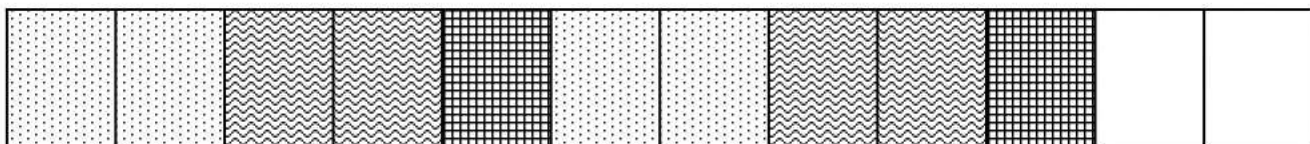
6)



7)



8)



Name:

## Repeating Patterns - Brackets

## Questions

## Draw your own bracelets using repeating





Name: \_\_\_\_\_

29

Curriculum Connection  
C1.1, C1.2

## Repeating Patterns - Necklace

Questions

Draw your own necklace using a repeating pattern



**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 12<sup>th</sup> 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 15<sup>th</sup> 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 28<sup>th</sup> position?



## 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 20<sup>th</sup> 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 20<sup>th</sup> 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 20<sup>th</sup> 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 20<sup>th</sup> car?

Answer: \_\_\_\_\_



# Translating Patterns – AB Patterns

## Translating Patterns

The pattern red, blue, red, blue can be translated to clap, stomp, clap, stomp. These are both A/B patterns.



### Questions

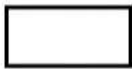

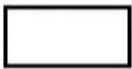

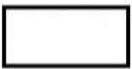




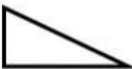

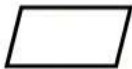




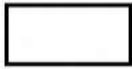







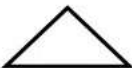

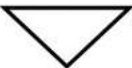

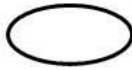

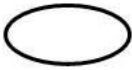
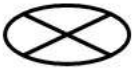
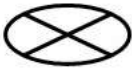
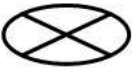
Translate the first pattern into a new pattern using different colours

1)	B	A	B	A	B	
Translated						
2)	A	A	A	B	B	
Translated						
3)	A	B	C	C	C	
Translated						
4)	A	A	B	A	A	B
Translated						
5)	A	B	A	A	B	A
Translated						

# Translating Patterns – AB Patterns

**Questions**


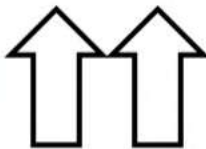
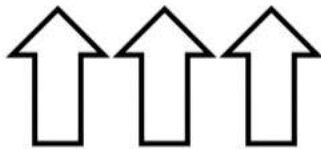

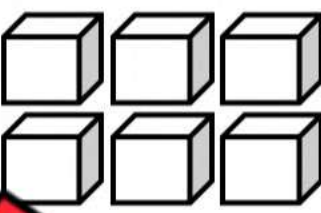

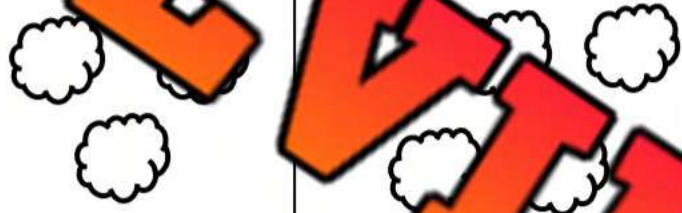
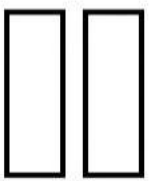
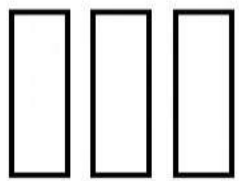

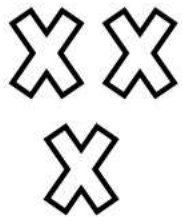
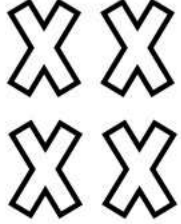
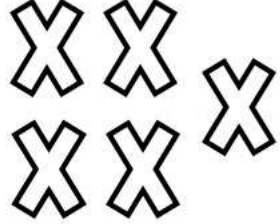



Create a new pattern that is a translation of the other pattern

1)						
Translated						
						
Translated						
3)						
Translated						
4)						
Translated						
5)						
Translated						
6)						
Translated						

# Increasing Patterns - Shapes

**Questions**

Draw the shapes in the last column

1)				
2)				
3)				
4)				
5)				
6)				



# Increasing Patterns - Shapes

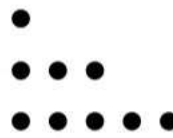
**Questions**

Draw the next line of the increasing pattern

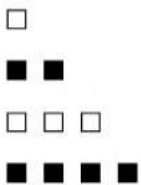
1) Draw the next line in the pattern.

Answer

2) Draw the next line in the pattern.

Answer

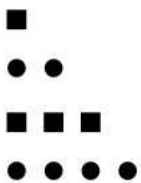
3) Draw the next line in the pattern.

Answer

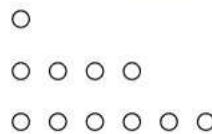
4) Draw the next line in the pattern.

Answer

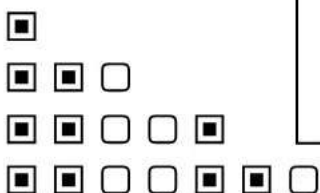
5) Draw the next line in the pattern.

Answer

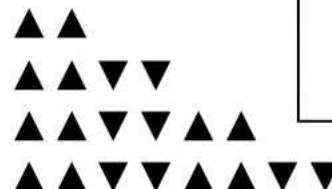
6) Draw the next line in the pattern.



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.

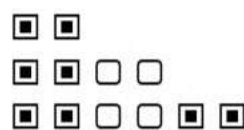



---

---

Name: \_\_\_\_\_

Draw the next 2 lines in the pattern.

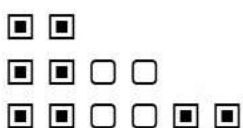



---

---

Name: \_\_\_\_\_

Draw the next 2 lines in the pattern.




---

---

Name: \_\_\_\_\_

Draw the next 2 lines in the pattern.




---

---

# Increasing Patterns – Shapes

## Part 1

Shade in the block that was added to the pattern



1) Figure 1

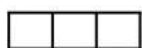


Figure 2

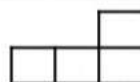


Figure 3

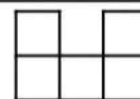


Figure 4



2) Figure 1



Figure 2



Figure 3

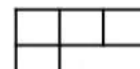


Figure 4



3) Figure 1



Figure 2



Figure 3

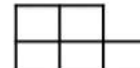


Figure 4



4) Figure 1



Figure 3

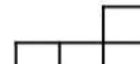


Figure 4

## Part 2

Shade in the two blocks that were added to the pattern



1) Figure 1

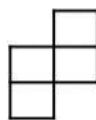
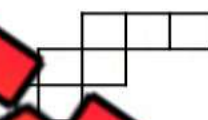


Figure 2



Figure 3



2) Figure 1

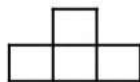


Figure 2

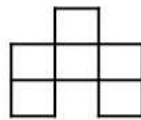
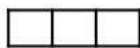


Figure 3



Figure 4



3) Figure 1

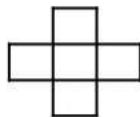


Figure 2

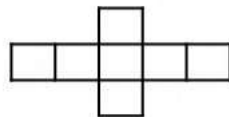


Figure 3

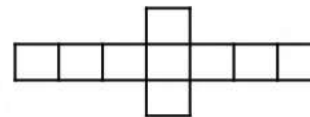


Figure 4



4) Figure 1

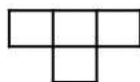


Figure 2

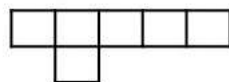


Figure 3

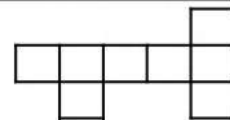


Figure 4

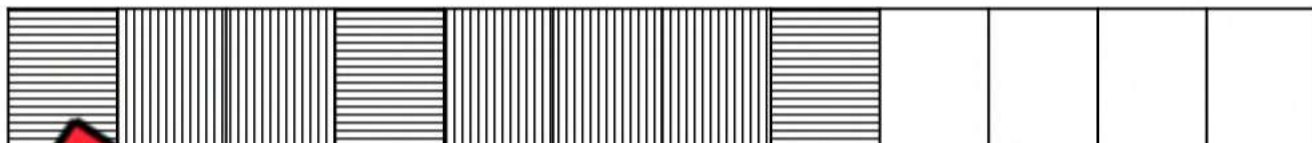


## Increasing Patterns - Beading

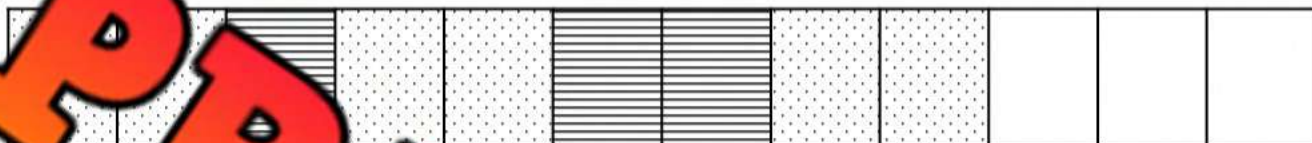
**Questions**

Draw the remaining patterns on the bracelets

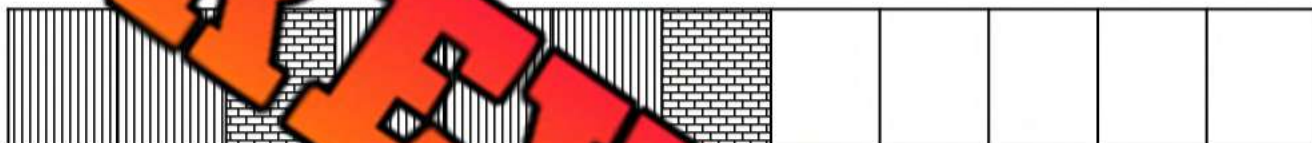
1)



2)



3)



4)



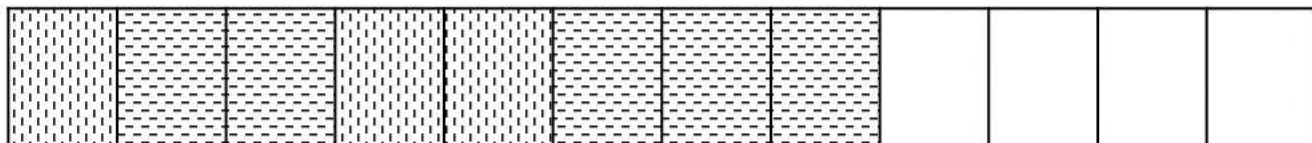
5)



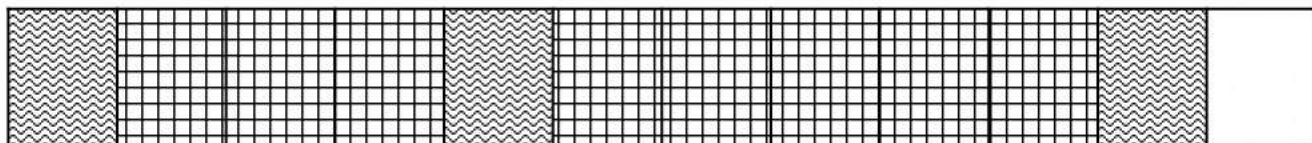
6)



7)



8)



Name: \_\_\_\_\_

## Increasing Patterns - Bracelets



Draw your own bracelets using increasing patterns.

Questions

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

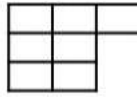
--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

**PREVIEW**

# Representing Picture Sequence With Numbers

**Questions**

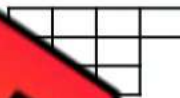
Write the numerical sequence that represents the picture sequence



1) Figure      Figure 2      Figure 3

**Numerical Sequence**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



2) Figure 1      Figure      Figure

**Numerical Sequence**

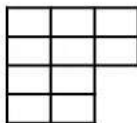
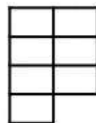
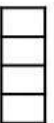
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



3) Figure 1      Figure 2      Figure 3

**Numerical Sequence**

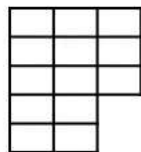
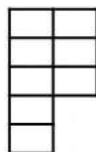
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



4) Figure 1      Figure 2      Figure 3

**Numerical Sequence**

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



5) Figure 1      Figure 2      Figure 3

**Numerical Sequence**

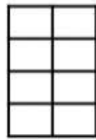
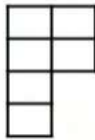
\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_



# Representing Picture Sequence With Numbers

**Questions**

Write the numerical sequence that represents the picture sequence



1)

Figure 1

Figure 3

Figure 4

**Numerical  
Sequence**

\_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_



2)

Figure 1

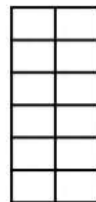
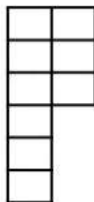
Figure 2

Figure 3

Figure 4

**Numerical  
Sequence**

\_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_



3)

Figure 1

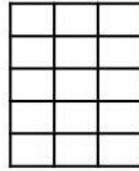
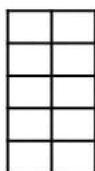
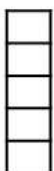
Figure 2

Figure 3

Figure 4

**Numerical  
Sequence**

\_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_



4)

Figure 1

Figure 2

Figure 3

Figure 4

**Numerical  
Sequence**

\_\_\_\_, \_\_\_\_, \_\_\_\_, \_\_\_\_

Name: \_\_\_\_\_

57

Curriculum Connection  
C1.3

# 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

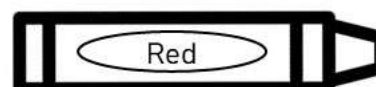
Directions

Follow the instructions below

1) Colour the odd numbers



2) Colour the even numbers



# Hundreds Chart Patterns

**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		32	34	35	36	37	38	39	40
41	42		44	45	46	47	48	49	50
51	52		54		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		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: \_\_\_\_\_

61

Curriculum Connection  
C1.3

## Number Patterns 1 - 20

Questions

Fill in the blanks below

1. 

2. 

3. 

4. 

5. 

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

Fill in the blanks below

1.



2

4

6

8

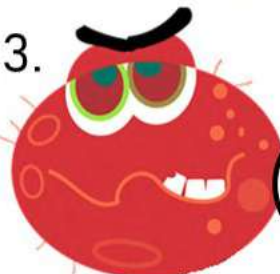
2.



1

20

3.



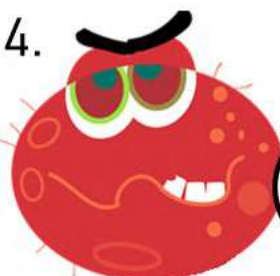
10

20

30

40

4.



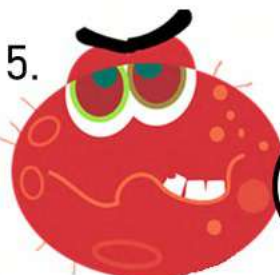
15

20

25

20

5.



20

22

24

26



Name: \_\_\_\_\_

65

Curriculum Connection  
C1.3

## Number Patterns – 2s

Questions

Fill in the blanks below

1.



2.



3.



4.

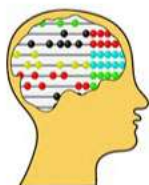


5.





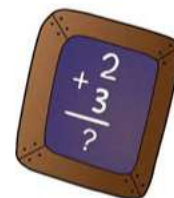
# Growing Patterns - Addition



## 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)  $\wedge$   $\wedge$   
10, 15, 20, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4)  $\wedge$   $\wedge$   
5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 58, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5)  $\wedge$   $\wedge$   
2, 8, 14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6)  $\wedge$   
10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90, 95, 100, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

### 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)

1, 7, 13, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) (Add 5)

5, 10, 15, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) (Add 10)

4, 14, 24, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) (Add 4)

42, 46, 50, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## 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

15, 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

## 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



# 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.

Name: \_\_\_\_\_

76

Curriculum Connection  
C1.3

## 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) 50, 60, 70, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ add \_\_\_\_\_ each time

5) 73, 77, 81, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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 10, add 0 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 27, add 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

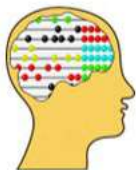
Pattern Rule: Start at 46, add 4 each time

Name: \_\_\_\_\_

77

Curriculum Connection  
C1.3

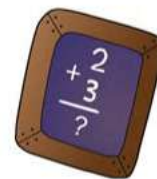
# Shrinking Patterns - Subtraction



## 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) 75, 55, _____, _____, _____
$\wedge$ $\wedge$ 5) 56, 48, 40, _____, _____, _____	$\wedge$ $\wedge$ 6) 85, 65, _____, _____, _____

### Part 2

Follow the rule by adding the next number in the

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



## Decreasing Patterns - Rules

**Questions**

Fill in the blanks by figuring out the pattern rules

18, 16, 14, 12, 10, 8, 6, 4

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

40, 35, 30, 25, 20, 15

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

80, 70, 60, 50, 40, 30, 20

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

28, 25, 22, 19, 16, 13, 10, 7

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

67, 57, 47, 37, 27, 17, 7

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

54, 48, 42, 36, 30, 24, 18, 12

Start at \_\_\_\_\_, then subtract \_\_\_\_\_ each time

## Creating Rules

**Questions**

Write your own patterns using the pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 18, subtract 2 each time

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_, subtract 10 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 35, subtract \_\_\_\_\_ each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 23, subtract 3 each time

5) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 44, subtract 4 each time

## Creating Rules

**Questions**

Write your own patterns using the pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 25, subtract 2 each time

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_, subtract 4 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 32, subtract \_\_\_\_\_ each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 67, subtract 10 each time

5) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 48, 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, 18, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

3) 36, 30, 20, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

4) 36, 30, 24, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ subtract \_\_\_\_\_ each time

5) 48, 44, 40, \_\_\_\_\_, \_\_\_\_\_

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 28, subtract 4 each time

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 55, subtract 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 76, subtract 3 each time

## Pattern Rule - Multiplication

**Part 1**

Continue the growing/increasing patterns below

1) 5, 10, 20, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 5, multiply by \_\_\_\_\_ each time

2) 1, 3, 9, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ multiply by \_\_\_\_\_ each time

3) 1, 6, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ multiply by \_\_\_\_\_ each time

4) 10, 20, 40, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ multiply by \_\_\_\_\_ each time

5) 2, 6, 18, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_ multiply by \_\_\_\_\_ each time

**Part 2**

Write your own patterns using the pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 5, multiply by 2 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_





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

# Multiplication Word Problems

## Questions

Answer the questions below



	Word Problems	Answers
1	<p>Lily is stacking toy blocks. On the first day, she stacks 2 blocks. Each day, she doubles the number of blocks she stacks. How many blocks will she have stacked by the 4th day?</p> 	
2	<p>A farmer plants carrot seeds on the first day. Each day, he plants 3 times more than the previous day. How many seeds does he plant on day 4?</p> 	
3	<p>A squirrel gathers 2 acorns on the first day. Every day, he gathers 5 times the number of acorns from the day before. How many acorns will he have on day 3?</p> 	
4	<p>A scientist is studying bacteria. On the first day, there are 2 bacteria. Each day, the bacteria multiply by 5. How many bacteria will there be on day 4?</p> 	



Name: \_\_\_\_\_

87

Curriculum Connection  
C1.3, C1.4

## Pattern Rule - Division

### Part 1

Continue the growing/increasing patterns below

1) 120, 60, 30, \_\_\_\_\_

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

2) 10, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 10, divide by \_\_\_\_\_, each time

3) 80, 40, 20, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_, divide by \_\_\_\_\_, each time

4) 128, 64, 32, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at \_\_\_\_\_, divide by \_\_\_\_\_, each time

### Part 2

Write your own patterns using the pattern rule

1) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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

2) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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

3) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 250, divide by 5 each time

4) \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

Pattern Rule: Start at 160, divide by 2 each time

**Division Word Problems****Questions**

Answer the questions below

	Word Problems	Answers
1	<p>A farmer has 128 bananas. Each day, he divides them by 2 to use in smaller baskets. How many bananas will be left after 4 days?</p>	
2	<p>A bakery starts with 80 cookies. Each day, it sells 1/4 of the remaining cookies. How many cookies will be left after 3 days?</p>	



# Input/Output Table – Addition



Rule: add 5	
In	Out
25	30
45	50
65	70
85	90

Questions 1-5 Complete the input/output tables below

Rule: add 3	
In	Out
20	
30	
50	
120	

Rule: add 2	
In	Out
2	
18	
44	
92	

Rule: add 6	
In	Out
30	
50	
70	
90	

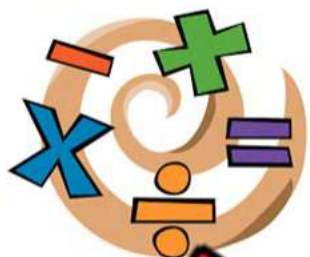
Rule: add 4	
In	Out
5	
11	
22	
8	

Rule: add 5	
In	Out
20	
22	
55	
61	

Rule: add 8	
In	Out
2	
12	
22	
32	



# Input/Output Table – Subtraction



Rule: subtract 5	
In	Out
35	30
50	45
65	60
80	75

Questions 1-5 Use the input/output tables below

Rule: subtract 3	
In	Out
10	
35	
55	
100	

Rule: subtract 2	
In	Out
4	
28	
45	
77	

Rule: subtract 6	
In	Out
6	
14	
47	
66	

Rule: subtract 1	
In	Out
5	
25	
57	
8	

Rule: subtract 5	
In	Out
9	
18	
27	
36	

Rule: subtract 4	
In	Out
23	
48	
67	
85	

# 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 1

In	Out
2	
5	
10	
20	

Rule: multiply by 2

In	Out
2	
3	
4	
5	

Rule: multiply by 0

In	Out
2	
18	
49	
92	

Rule: multiply by 3

In	Out
2	
3	
4	
5	

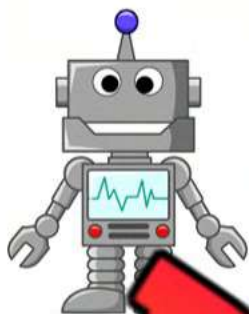
Rule: multiply by 5

In	Out
1	
3	
5	
7	

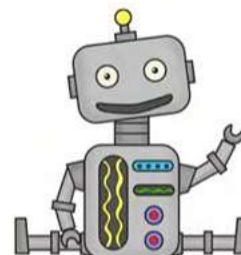
Rule: multiply by 10

In	Out
2	
5	
8	
10	

# Input/Output Table - Division



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



Questions 1-5 Use the input/output tables below

Rule: divide by 1	
In	Out
1	
5	
10	
20	

Rule: divide by 2	
In	Out
6	
10	
4	
20	

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	



# 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 4		Rule: divide by 2	
In	Out	In	Out
1		4	
2		8	
4		20	
10		100	

Name: \_\_\_\_\_

Fill in the input/output tables below

Rule: multiply by 4		Rule: divide by 2	
In	Out	In	Out
1		4	
2		8	
4		20	
10		100	

Name: \_\_\_\_\_

Fill in the input/output tables below

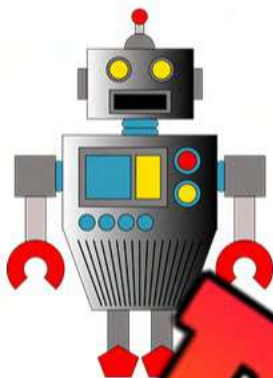
Rule: multiply by 4		Rule: divide by 2	
In	Out	In	Out
1		4	
2		8	
4		20	
10		100	

Name: \_\_\_\_\_

Fill in the input/output tables below

Rule: multiply by 4		Rule: divide by 2	
In	Out	In	Out
1		4	
2		8	
4		20	
10		100	

# Pattern Rule – Input/Output Tables



Add 10 or Subtract 10	
In	Out
20	30
30	40
50	60
90	100



Instructions: Complete the input/output tables below

Rule: add 10	
In	Out
10	
30	
	55
70	

Rule: add 3	
In	Out
3	
12	
	30

Rule: subtract 6	
In	Out
	20
38	
59	
	62

Rule: subtract 4	
In	Out
20	
	24
66	
	83



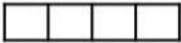







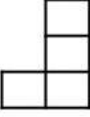
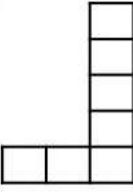

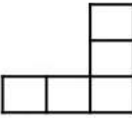
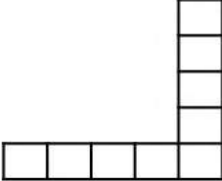
Rule: subtract 2	
In	Out
12	
72	
	88
	92

Rule: add 6	
In	Out
3	
12	
	20
	38

# T-Tables – Finding Patterns

## Questions

Fill in the T-Tables by counting the blocks

   <p>1) Figure 1                      Figure 2                      Figure 3</p>	<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4		<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4	
Figure	Term Value																					
1																						
2																						
3																						
4																						
Figure	Term Value																					
1																						
2																						
3																						
4																						
   <p>2) Figure 1                      Figure 2                      Figure 3</p>	<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4		<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4	
Figure	Term Value																					
1																						
2																						
3																						
4																						
Figure	Term Value																					
1																						
2																						
3																						
4																						
   <p>3) Figure 1                      Figure 2                      Figure 3</p>	<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4		<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4	
Figure	Term Value																					
1																						
2																						
3																						
4																						
Figure	Term Value																					
1																						
2																						
3																						
4																						
   <p>4) Figure 1                      Figure 2                      Figure 3</p>	<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4		<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4	
Figure	Term Value																					
1																						
2																						
3																						
4																						
Figure	Term Value																					
1																						
2																						
3																						
4																						
   <p>5) Figure 1                      Figure 2                      Figure 3</p>	<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4		<table border="1"> <thead> <tr> <th>Figure</th> <th>Term Value</th> </tr> </thead> <tbody> <tr><td>1</td><td></td></tr> <tr><td>2</td><td></td></tr> <tr><td>3</td><td></td></tr> <tr><td>4</td><td></td></tr> </tbody> </table>	Figure	Term Value	1		2		3		4	
Figure	Term Value																					
1																						
2																						
3																						
4																						
Figure	Term Value																					
1																						
2																						
3																						
4																						



# Table of Values – Term Numbers/Values

## Questions

Fill in the tables of values below

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

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

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

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

Term Number	Term Value	
1	45	+
2	50	+
3	55	+
4		+
5		+
6		+
10		

Term Number	Term Value	
1	100	-
2	95	-
3		-
4		-
5	80	-
6		-
10		

# 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	

If you are having a birthday party for your family and 5 kids coming to the party. Each kid gets 2 slices of pizza.



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

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

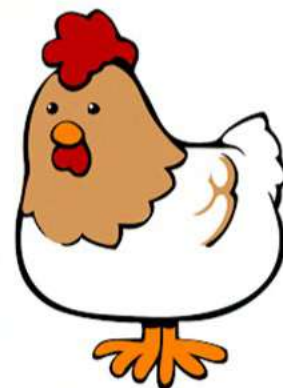
## The Egg Challenge

**Challenge**

Answer the word problem below

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

**PREVIEW**



How many days would the hen need to lay 55





## 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 share. He gets 3 candies for each house he visits. He visits 10 houses.

a) Draw the pattern below.



b) How many total candies does he get?



## Patterning Word Problems – Growing Hair

**Questions**

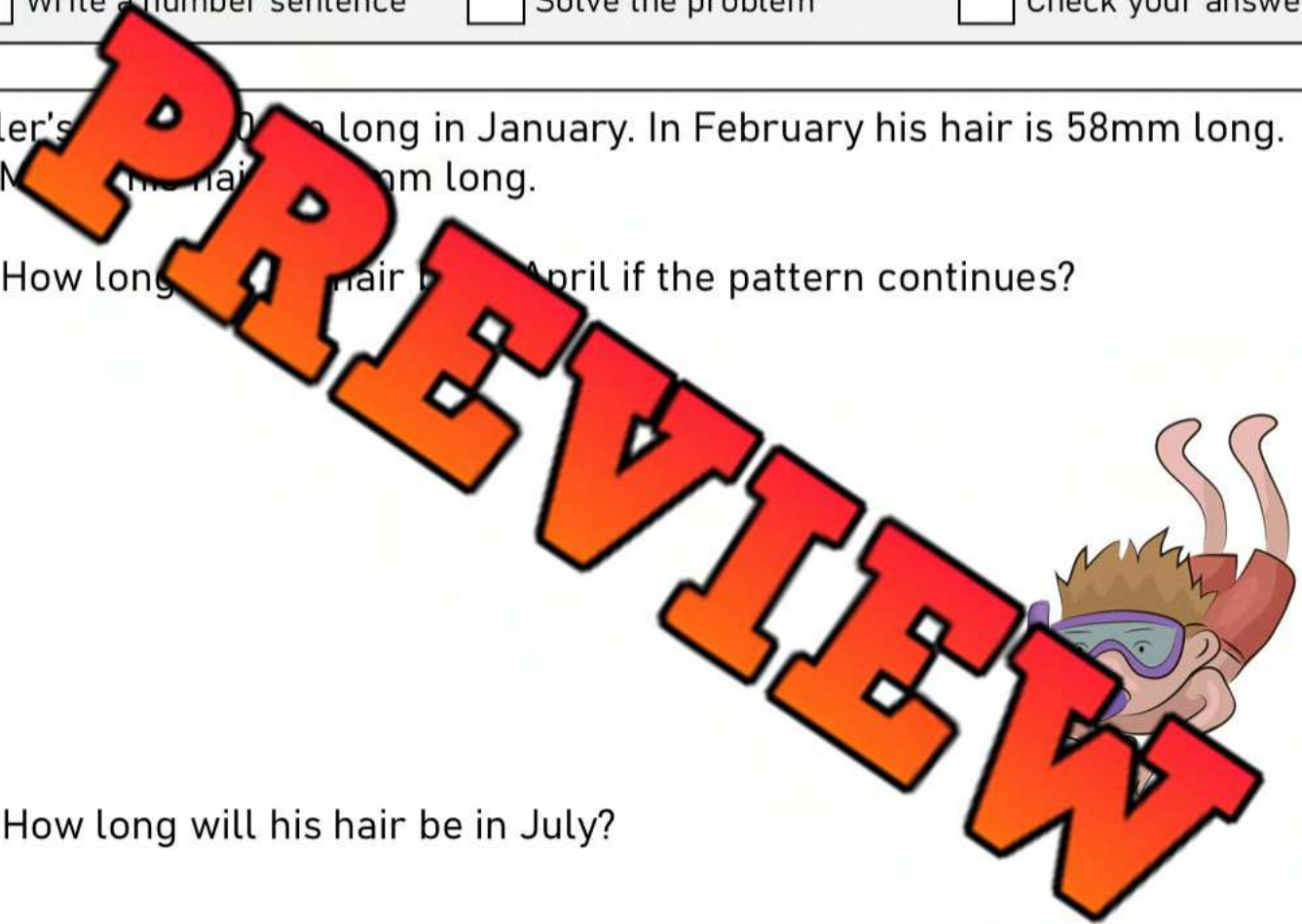
Follow the problem-solving steps below

- |   |  |  |
|---|--|--|
| <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 20mm long in January. In February his hair is 58mm long.  
In March his hair is 96mm long.

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

b) How long will his hair be in July?



## 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 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.

Name: \_\_\_\_\_

111

Curriculum Connection  
C1.3, C1.4

Instructions

Cut out the cards below

1) 3, 6, 9,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) 10, 20, 30,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) (Add 5) 5, 10,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

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 100,  
subtract 15 each time.  
100, 85, 70,

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Instructions

Cut out the cards below

25) Leah had \$50. She earns \$10 more each day. How much money will Leah have after 3 days?

26) Pattern Rule: Subtract 2 starting from 18.

\_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

27) Sara planted a tree. 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 80 candies and eats 10 each day. How many candies are left after 8 days?

30) Anna starts at 10 and triples her score in each round of a game. What will her score be 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?

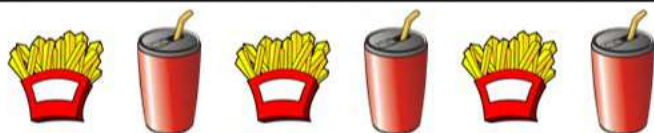


Name: \_\_\_\_\_

## Algebra Quiz - Patterning

### Part 1

Continue the repeating patterns below by drawing 3 more pictures



### Part 2

Circle the pattern and continue the pattern

A B C C A B C \_\_\_\_\_, \_\_\_\_\_

A B B C D A B B C D \_\_\_\_\_, \_\_\_\_\_

A B C B A B C B \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

### Part 3

Follow the rule by adding or subtracting to the

1) (Add 5)

3, 8, 13, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

2) (Add 3)

23, 26, 29, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

3) (Add 6)

2, 8, 14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

4) (subtract 2)

18, 16, 14, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

5) (subtract 10)

60, 50, 40, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

6) (subtract 4)

46, 42, 38, \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_

## Part 4

## T-Tables

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

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

Figure 1

Figure 2

Figure 3

Figure 4

Figure	Term Value
1	
2	
3	
4	

## Part 5

Solve the word problem below. Show your work!

If you read 1 book on Monday, 2 books on Tuesday, 3 books on Wednesday, 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**  
**C2. Equations and Inequalities**

	<b>Curriculum Expectations</b>	<b>Pages That Cover the Expectations</b>
<b>C2.1</b>	identify when symbols are being used as variables, and describe how they are being used	137 – 143, 159 – 168
<b>C2.2</b>	determine what needs to be added to or subtracted from addition and subtraction expressions to make them equivalent	118 – 168
<b>C2.3</b>	identify and use equivalent relationships for whole numbers up to 100, in various contexts	169 – 172

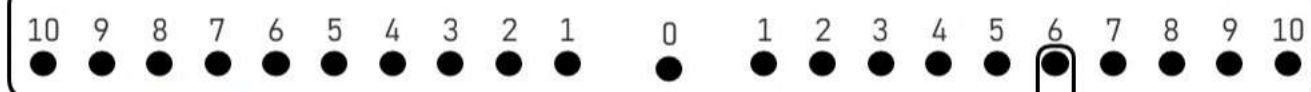


# Balance Pan Equations

**Questions**

How many ways can you balance the equation to equal 6

1)



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

2)



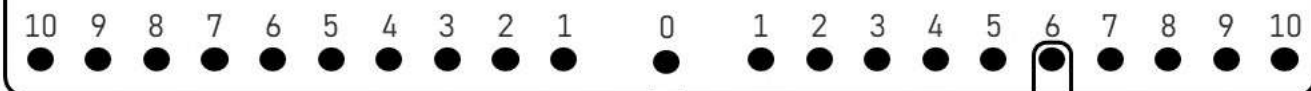
$$\underline{\quad\quad} + \underline{\quad\quad} = \underline{\quad\quad}$$

3)



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

4)



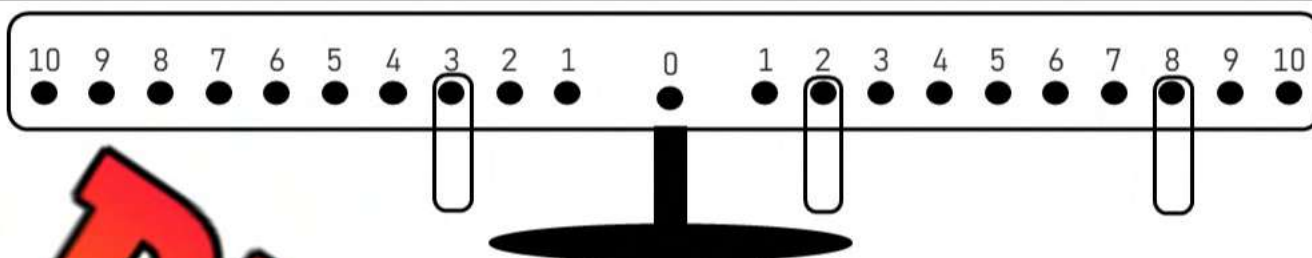
$$\underline{\quad\quad} + \underline{\quad\quad} = 6$$

# Balance Pan Equations

**Questions**

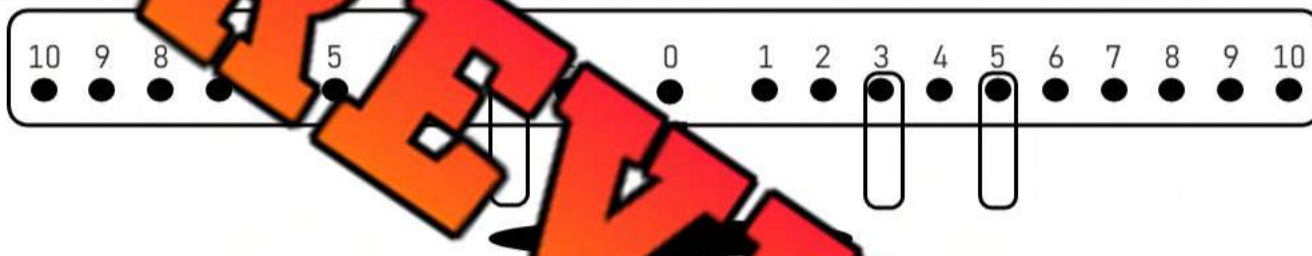
Balance the equations below

1)



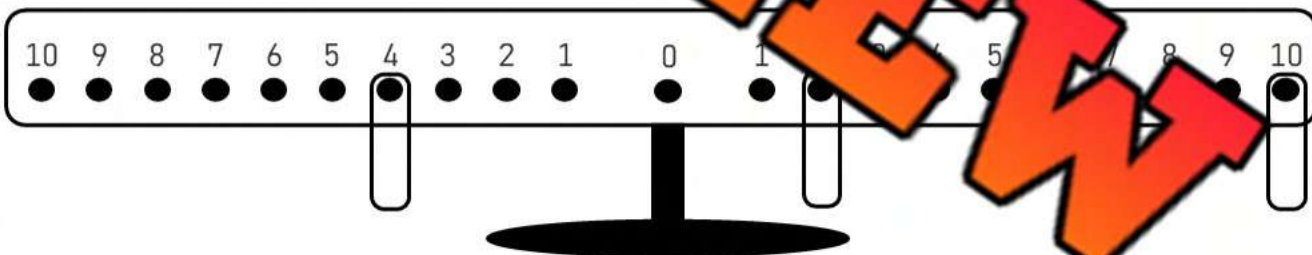
$$3 + \underline{\quad} = 2 + 8$$

2)



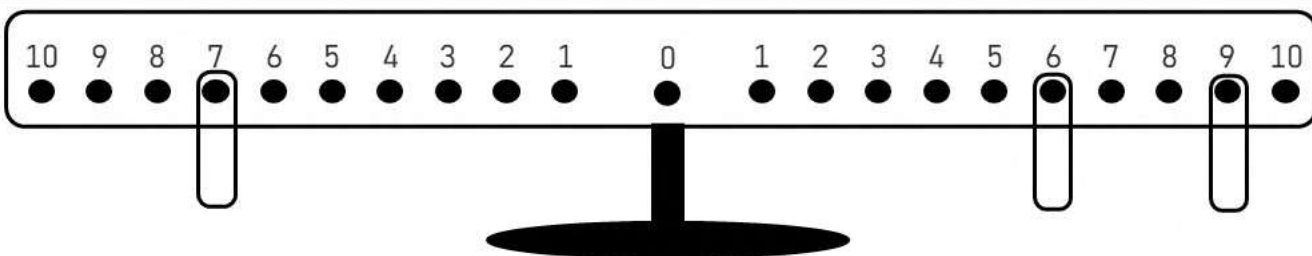
$$2 + \underline{\quad} = \underline{\quad} + \underline{\quad}$$

3)



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

4)

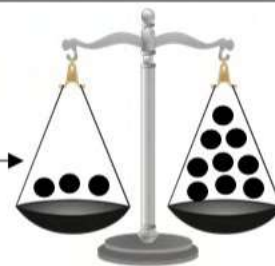


$$7 + \underline{\quad} = 6 + 9$$

# 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
---	---	---	---	---

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



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



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



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



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



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



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



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



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



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



Name: \_\_\_\_\_

125

Curriculum Connection  
C2.2

## Addition – Are They Equal?

Are the equations equal? Put an X through the equal sign for any equations that are not equal.

$5 + 3 = 8$

$21 + 10 \neq 30$

$17 + 11 = 28$

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

1) $1 + 10 =$	2) $4 + 4 = 8$	3) $6 + 6 = 11$
4) $8 + 6 = 14$	5) $10 + 10 = 20$	6) $13 + 10 = 24$
7) $9 + 3 = 12$	8) $7 + 5 = 12$	9) $9 + 7 = 16$
10) $8 + 4 = 13$	11) $17 + 3 = 20$	12) $10 + 10 = 20$
13) $23 + 6 = 30$	14) $10 + 10 = 20$	15) $15 + 15 = 30$
16) $40 + 0 = 400$	17) $53 + 6 = 59$	18) $21 + 5 = 25$
19) $20 + 12 = 32$	20) $75 + 4 = 80$	21) $2 + 46 = 47$

## 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) $7 + 5 = 2 + 7$	7) $6 + 3 = 2 + 5$
2) $7 + 3 = 5 + 4$	$6 + 5 = 4 + 8$
3) $8 + 5 = 4 + 7$	8) $5 + 2 = 1 + 9$
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)  $5 + 15 = 10 + 10$

b)  $20 + 6 = 15 + 10$

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)  $20 + 6 = 15 + 10$

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)  $30 + 2 = 29 + 4$



## 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)

$3 + 6$

$4 + 7$

$8 + 1$

# Pre-Algebra – Balancing Addition Equations

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

**Examples:**

$$\begin{array}{c} 10 \\ \swarrow \quad \searrow \\ 3 + 7 = \boxed{10} \end{array}$$

$$\begin{array}{c} 30 \\ \swarrow \quad \searrow \\ 24 + 6 = \boxed{30} \end{array}$$

## Questions

Fill in the missing number to balance the equation

1) 4

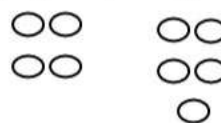


+

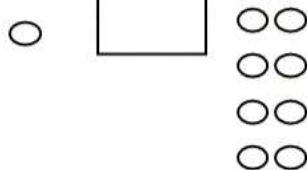
2) 3 + 6 =



3) 4 + 5 =



4) 1 +  = 8



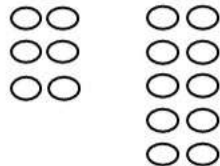
5) 6 +  = 10



6) 4 +  = 12



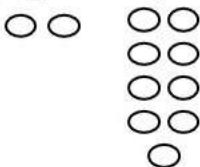
7)  + 6 = 10



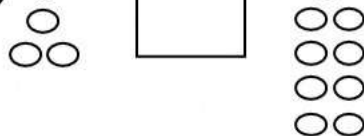
8)  + 7 = 11



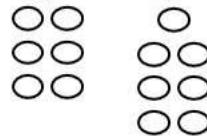
10)  + 2 = 9



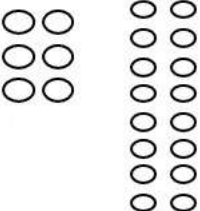
11) 3 +  = 8



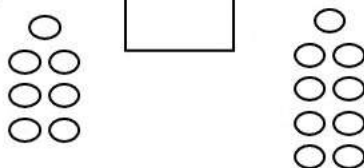
12) 6 + 7 =



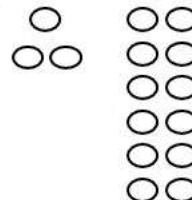
13)  + 6 = 16



14) 7 +  = 9



15) 3 + 12 =



## Pre-Algebra – Balancing Addition Equations

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

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

Examples:

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

### Questions

Fill in the missing number to balance the equation

1) 6

2)  $2 + 6 =$

3)  $4 + 6 =$

4)  $3 +$

$= 8$

5)  $4 +$

$= 10$

6)  $12 +$

$= 15$

7)

$+ 6 = 10$

8)

$+ 5 = 1$

9)

$+ 15 = 20$

10)  $14 + 4 =$

11)  $12 +$

$= 17$

12)  $10 +$

$= 14$

13)  $17 +$

$= 25$

14)  $20 + 7 =$

15)  $23 +$

$= 30$

16)  $16 +$

$= 24$

17)  $21 + 7 =$

18)  $30 +$

$= 36$

19)  $40 +$

$= 48$

20)  $43 + 10 =$

21)  $47 +$

$= 51$



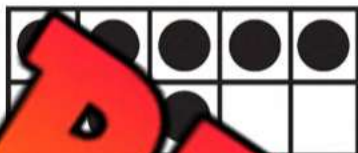
## Making Tens – Changing Variables

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

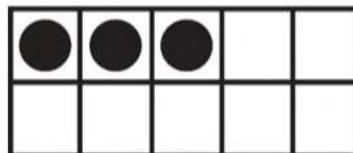
How many more dots do you need to add to make 10?

1)



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

2)



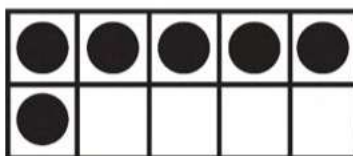
$$3 + \underline{\quad} = 10$$

3)



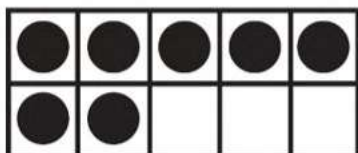
$$2 + \underline{\quad} = 10$$

4)



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

5)



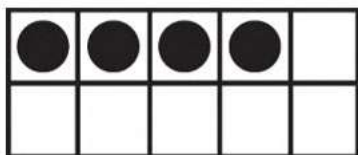
$$7 + \underline{\quad} = 10$$

6)



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

7)



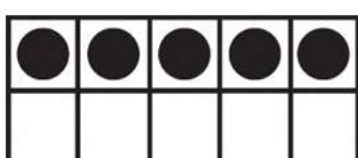
$$4 + \underline{\quad} = 10$$

8)



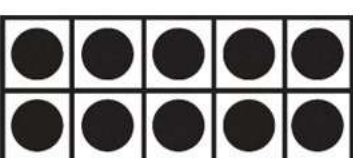
$$1 + \underline{\quad} = 10$$

9)



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

10)



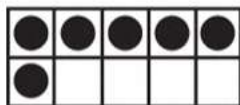
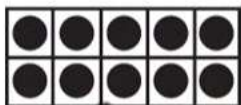
$$10 + \underline{\quad} = 10$$

# Making 20 – Changing Variables

**Questions**

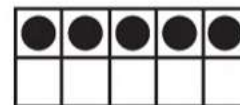
How many more dots do you need to add to make 20?

1)



$$= 20$$

2)



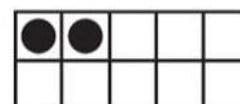
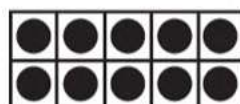
$$15 + \underline{\hspace{2cm}} = 20$$

3)



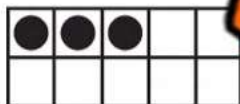
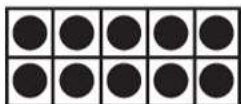
$$10 + \underline{\hspace{2cm}} = 20$$

4)



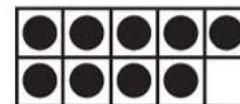
$$12 + \underline{\hspace{2cm}} = 20$$

5)



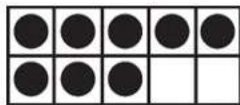
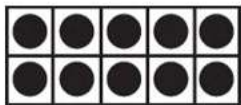
$$13 + \underline{\hspace{2cm}} = 20$$

6)



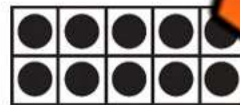
$$= 20$$

7)



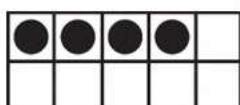
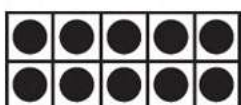
$$18 + \underline{\hspace{2cm}} = 20$$

8)



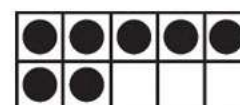
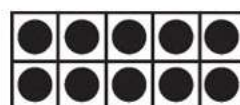
$$11 + \underline{\hspace{2cm}} = 20$$

9)



$$14 + \underline{\hspace{2cm}} = 20$$

10)



$$17 + \underline{\hspace{2cm}} = 20$$

## 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 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

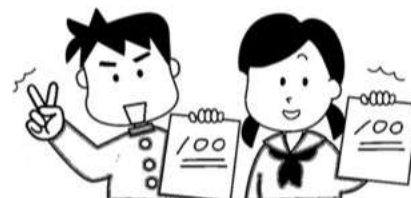
\$100	\$200	\$300	\$400	\$500
$\_\_ + 2 = 7$	$\_\_ + 3 = 6$	$10 + \_\_ = 20$	$3 + \_\_ = 12$	$4 + \_\_ + 3 = 10$
$\_\_ + 15 = 25$	$\_\_ + 12 = 32$	$20 + \_\_ = 53$	$\_\_ + 15 = 40$	$40 + 25 + \_\_ = 100$
Balance the equation: $1 + 1 = 1 + \_\_$	Balance the equation: $2 + 2 = 1 + \_\_$	Balance the equation: $5 + 2 = \_\_ + 4$	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: $1 + 7 + 3 = \_\_ + 11$	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 11 rocks. He found some more and now has 28 rocks. How many rocks did he find?	Arbelle has some seeds. She then buys 7 seeds from one store and 14 from another. She now has 25 seeds. How many seeds did she start with?	Emma has some seeds. She then buys 7 seeds from one store and 14 from another. She now has 25 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 – Find the Variable

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

Example:  $8 + n = 15$

We can figure out the unknown number by balancing the equation. In this equation,  $n = 7$ .



Question: Find out the value of the variable

1) $7 + n = 10$ $n =$	2) $7 + 5 = 8$ $n =$	3) $10 + n = 13$ $n =$
4) $6 + 6 = p$ $p =$	5) $6 + p = 12$ $p =$	6) $p + 4 = 12$ $p =$
7) $7 + y = 14$ $y =$	8) $y + 6 = 14$ $y =$	9) $6 + y = 14$ $y =$
10) $5 + t = 15$ $t =$	11) $14 + t = 20$ $t =$	12) $20 + t = 25$ $t =$
13) $22 + a = 28$ $a =$	14) $30 + a = 40$ $a =$	15) $24 + a = 30$ $a =$
16) $27 + 6 = s$ $s =$	17) $35 + s = 41$ $s =$	18) $42 + s = 48$ $s =$

## Exit Cards

Cut Out

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

Name: \_\_\_\_\_

Find out the value of the variables

a)  $n + 4 = 24$        $n =$  \_\_\_\_\_

b)  $22 + y = 29$        $y =$  \_\_\_\_\_

c)  $21 + t = 35$        $t =$  \_\_\_\_\_

d)  $s + 40 = 48$        $s =$  \_\_\_\_\_

Name: \_\_\_\_\_

Find out the value of the variables

a)  $n + 4 = 24$        $n =$  \_\_\_\_\_

b)  $22 + y = 29$        $y =$  \_\_\_\_\_

c)  $21 + t = 35$        $t =$  \_\_\_\_\_

d)  $s + 40 = 48$        $s =$  \_\_\_\_\_

Name: \_\_\_\_\_

Find out the value of the variables

a)  $n + 4 = 24$        $n =$  \_\_\_\_\_

b)  $22 + y = 29$        $y =$  \_\_\_\_\_

c)  $21 + t = 35$        $t =$  \_\_\_\_\_

d)  $s + 40 = 48$        $s =$  \_\_\_\_\_

Name: \_\_\_\_\_

Find out the value of the variables

a)  $n + 4 = 24$        $n =$  \_\_\_\_\_

b)  $22 + y = 29$        $y =$  \_\_\_\_\_

c)  $21 + t = 35$        $t =$  \_\_\_\_\_

d)  $s + 40 = 48$        $s =$  \_\_\_\_\_



## 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

$$5 + 4 = 9$$



Instruction: How many coins are in the bags below?

1)

7



Answer: \_\_\_\_\_

2)

10



Answer: \_\_\_\_\_

3)

12



Answer: \_\_\_\_\_

15



Answer: \_\_\_\_\_

5)

17



Answer: \_\_\_\_\_

6)

20



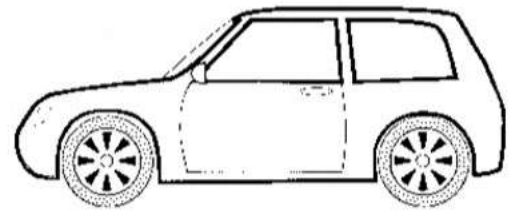
Answer: \_\_\_\_\_

## 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?

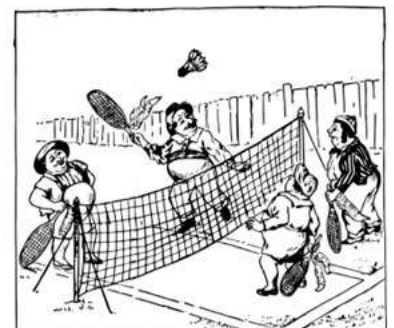


2) Steve got 25 points for beating level 1 in a video game. He got 25 more points for beating level 2. How many total points did he have after level 2?

**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?



$$11 - \square = 8$$



$$8 - \square = \square$$



$$10 - \square = 4$$



$$8 - \square = 1$$



$$11 - \square = 3$$



$$13 - \square = 2$$



$$10 - \square = 4$$



$$14 - \square = 1$$



$$4 - \square = 0$$



Name: \_\_\_\_\_

145

Curriculum Connection  
C2.2

## Subtraction – Are They Equal?

Are the equations equal? Put an X through the equal sign for any equations that are not equal

$7 - 2 = 5$

$25 - 6 \neq 18$

$15 - 11 = 4$

**Instruction**

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

1) $10 - 5 = 5$	2) $10 - 4 = 6$	3) $9 - 5 = 3$
4) $12 - 6 = 6$	5) $10 - 2 = 8$	6) $14 - 3 = 11$
7) $15 - 2 = 13$	8) $17 - 7 = 10$	9) $15 - 4 = 11$
10) $17 - 10 = 10$	11) $18 - 9 = 9$	12) $16 - 8 = 8$
13) $22 - 4 = 18$	14) $20 - 10 = 10$	15) $25 - 5 = 30$
16) $27 - 0 = 0$	17) $26 - 1 = 25$	18) $29 - 5 = 24$
19) $30 - 7 = 22$	20) $27 - 6 = 21$	21) $30 - 30 = 0$

## 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) $8 - 2 = 6$	2) $24 - 4 = 20$	3) $15 - 4 = 10$
4) $16 - 3 = 12$	5) $10 - 4 = 6$	6) $18 - 3 = 14$
7) $22 - 5 = 17$	8) $26 - 6 = 20$	9) $21 - 3 = 20$
10) $28 - 5 = 23$	11) $31 - 3 = 27$	12) $30 - 0 = 30$
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 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) $1 - 5 = 7 - 7$	7) $5 - 3 = 6 - 3$
2) $7 - 3 = 8$	8) $7 - 5 = 8 - 6$
3) $10 - 5 = 5 - 0$	9) $5 - 8 = 14 - 2$
4) $10 - 7 = 8 - 5$	10) $9 - 3 = 4$
5) $15 - 7 = 12 - 5$	11) $16 - 3 = 14 - 1$
6) $23 - 4 = 20 - 2$	12) $28 - 5 = 30 - 4$



# 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

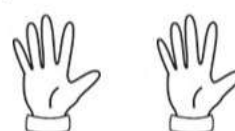
1) 4



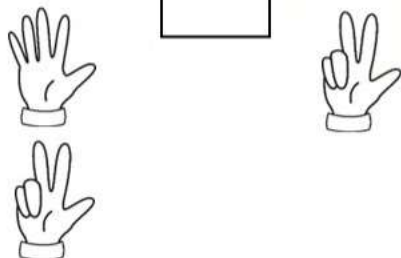
2) 3 - 2 =



3) 5 - 5 =



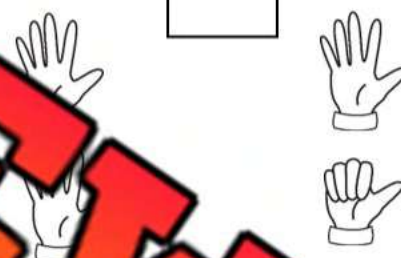
4) 8 - = 3



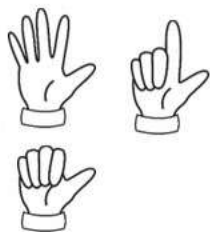
5) 2 - =



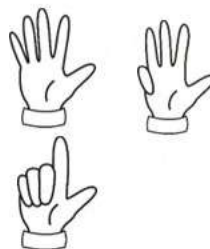
6) 10 - = 6



7) - 6 = 2



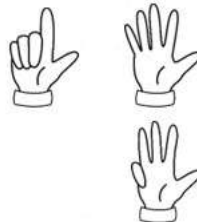
8) - 7 = 4



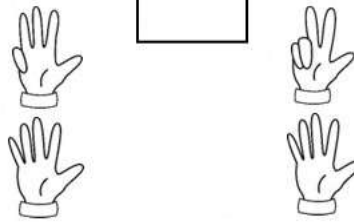
9) - 10 =



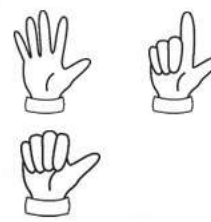
10) - 2 = 9



11) 9 - = 8



12) 6 - 2 =



# Pre-Algebra – Balancing Subtraction Equations

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

$$\begin{array}{c} 9 \\ \swarrow \searrow \\ 15 - 6 = \boxed{9} \end{array}$$

Examples:

$$\begin{array}{c} 15 \\ \swarrow \searrow \\ 20 - \boxed{5} = 15 \end{array}$$

## Questions

Fill in the missing numbers to balance the equations

1)  $8 - \boxed{\phantom{00}} = \boxed{\phantom{00}}$

2)  $6 - 6 = \boxed{\phantom{00}}$

3)  $9 - 5 = \boxed{\phantom{00}}$

4)  $10 - \boxed{\phantom{00}} = \boxed{\phantom{00}}$

6)  $8 - \boxed{\phantom{00}} = 4$

7)  $\boxed{\phantom{00}} - 6 = 3$

8)  $\boxed{\phantom{00}} - 5 = 1$

$\boxed{\phantom{00}} - 3 = 7$

10)  $10 - 10 = \boxed{\phantom{00}}$

11)  $12 - \boxed{\phantom{00}} = 9$

$\boxed{\phantom{00}} - 7 = 10$

13)  $14 - \boxed{\phantom{00}} = 11$

14)  $18 - 3 = \boxed{\phantom{00}}$

15)  $20 - \boxed{\phantom{00}} = 15$

16)  $22 - \boxed{\phantom{00}} = 19$

17)  $27 - 10 = \boxed{\phantom{00}}$

18)  $24 - \boxed{\phantom{00}} = 18$

19)  $30 - \boxed{\phantom{00}} = 20$

20)  $28 - 6 = \boxed{\phantom{00}}$

21)  $30 - \boxed{\phantom{00}} = 19$

## Subtraction – Which Equation Matches?

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

**Example:**

$9 - 4$

$8 - 3$

$10 - 6$



Questions

Circle the equation that matches the shaded in equation

1)

$4 - 1$

$7 - 3$

2)

$8 - 4$

$7 - 3$

3)

$10 - 2$

$9 - 2$

$9 - 1$

4)

$7 - 2$

$6 - 1$

5)

$12 - 3$

$11 - 2$

$9 - 1$

6)

$15 - 5$

$9 - 0$

$10 - 0$

7)

$9 - 5$

$8 - 3$

$10 - 6$



# 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 you will need for the activity.

- Pre-prepared pre-made 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 pre-prepared matching game cards.
2. Divide the students into small groups and give each group a bag or 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.



Name: \_\_\_\_\_

157

Curriculum Connection  
C2.2

Cards

Matching Game Cards

$$50 - 25$$

$$40 - 15$$

$$15 - 20$$

$$10 + 25$$

$$60 - 15$$

$$20 + 5$$

$$38 + 12$$

$$25 + 20$$

$$70 - 30$$

$$40 + 10$$

**PREVIEW**

Name: \_\_\_\_\_

158

Curriculum Connection  
C2.2

Cards

Matching Game Cards

$$45 + 15$$

$$30 + 30$$

$$80 + 5$$

$$60 + 10$$

$$55 + 5$$

$$40 + 15$$

$$90 - 40$$

$$50 + 0$$

$$65 + 10$$

$$50 + 25$$

**PREVIEW**

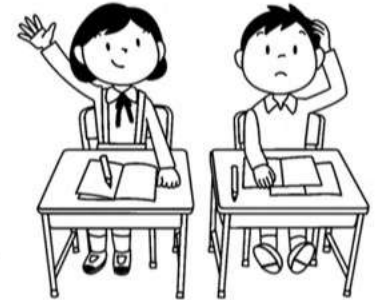


## Subtraction – Find the Variable

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

**Example:**  $18 - n = 5$

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



Questions: Find out the value of the variable

1) $9 - n = 5$  $n =$	2) $15 - 5 = 5$  $n =$	3) $3 - n = 0$  $n =$
4) $6 - 2 = p$  $p =$	5) $9 - 7 = p$  $p =$	6) $p - 4 = 2$  $p =$
7) $10 - y = 3$  $y =$	8) $y - 7 = 0$  $y =$	9) $12 - y = 10$  $y =$
10) $15 - t = 5$  $t =$	11) $17 - t = 13$  $t =$	12) $19 - t = 12$  $t =$
13) $22 - a = 14$  $a =$	14) $25 - a = 20$  $a =$	15) $27 - a = 23$  $a =$
16) $29 - 4 = s$  $s =$	17) $30 - s = 30$  $s =$	18) $40 - s = 19$  $s =$

## 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 video game for 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 sheet 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 responses.
4. Encourage teamwork by having students collaborate 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 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 40 candies. He gets some more 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 30 cookies. She ate some 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: \_\_\_\_\_

168

Curriculum Connection  
C2.1, C2.2

## Task Cards: Mystery Number Detectives

Answers

Record your answers below

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

13	
14	
15	
16	
19	
20	
21	
22	
23	
24	

Name: \_\_\_\_\_

## Algebra Quiz - Equations

### Part 1

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

1)  $5 + 10 = 15$

2)  $10 + 6 = 12$

3)  $15 + 10 = 25$

4)  $5 + 10 =$

5)  $10 - 4 = 6$

6)  $16 - 5 = 11$

### Part 2

Put the missing number to balance the equation

1)  $3 + 8 =$

3)  $9 +$    $= 15$

4)  $13 + 5 =$

5)   $+ 12 = 22$

6)  $5 +$    $= 17$

7)  $9 - 6 =$

8)   $- 4 = 7$

9)  $10 - 5 =$

10)  $19 - 5 =$

11)   $- 4 = 13$

12)  $17 - 2 =$



## Part 3

Find out the value of the variable

$7 + n = 10$ $n =$	$n - 5 = 5$ $n =$	$10 + n = 10$ $n =$	$n - 5 = 6$ $n =$
$n + 16 = 22$ $n =$	$n - 3 = 6$ $n =$	$n + 10 = 26$ $n =$	$n - 7 = 10$ $n =$

## Part 4

Find out the value of the variable

$a + b + c =$ $a =$ $b =$ $\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$	$n + y + t =$ $n = 3$ $y = 10$ $t = 5$ $\underline{\quad} + \underline{\quad} + \underline{\quad} = \underline{\quad}$
$a - b = c$ $a = 12$ $b = 8$ $\underline{\quad} + \underline{\quad} = \underline{\quad}$ $c =$	$e = f$ $e = 22$ $n = 6$ $\underline{\quad} - \underline{\quad} = \underline{\quad}$ $f =$

## 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?

## Grade 2

### C3. Coding

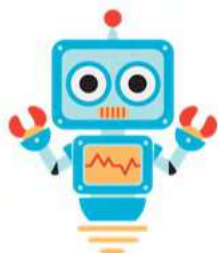
	Curriculum Expectations	Pages That Cover the Expectations
<b>C3.1</b>	solve problems and create computational representations of mathematical situations by writing and executing code, including code that involves sequential and concurrent events	174 – 185, 193 – 199
<b>C3.2</b>	read and alter existing code, including code that involves sequential and concurrent events, and describe how changes to the code affect the outcomes	186 – 192

Name: \_\_\_\_\_

174

Curriculum Connection  
C3.1

## Writing Code



### Writing Code – Code Bank

go right (# of spaces)  
go left (# of spaces)  
go down (# of spaces)  
go up (# of spaces)  
open door



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

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Robot moved \_\_\_\_\_ squares

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

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

Line 5: \_\_\_\_\_



Robot moved \_\_\_\_\_ squares

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

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

Line 5: \_\_\_\_\_



Robot moved \_\_\_\_\_ squares



## Activity: Shape Drawer – Coding Shapes

### Objective

What are we learning about?

Students will use sequential steps to code a path for drawing a square on graph paper, learning how coding can represent math shapes and practicing counting and geometry skills.

**Material** What you will need for the activity.

- Grid worksheet
- Pencils and pens
- Rulers (to draw straight lines)
- Chart paper or whiteboard (for teacher demonstration)

### Instructions

How you will complete the activity

1. Show students a square on the chart paper and tell them to "code" a path to draw it by giving step-by-step directions.
2. Demonstrate: Draw a square on grid paper (4 sides, each 4 units long) using steps like "forward 4, turn right, forward 4, turn right."
3. Give each student the grid paper worksheets and a pencil and tell them to start at a point on the grid (e.g., mark a dot).
4. Have students write a sequence of steps to draw a square: "right 4, down 4, left 4, up 4"
5. Ask students to draw the path on their graph paper by following their steps, using a ruler to make straight lines.
6. Have the students do the same for other shapes (letters). They should draw the shape and then write the coding sequence.



**Coding Shapes**

Draw your shapes on the grids and then write the coding instructions

Square	Coding Instructions

T-Shape	Coding Instructions

C-Shape	Coding Instructions

**Coding Shapes**

Draw your own shape on the grid below. Be creative! Then write the coding instructions.

**My Shape****Coding Instructions**

---

---

---

---

---

---

---



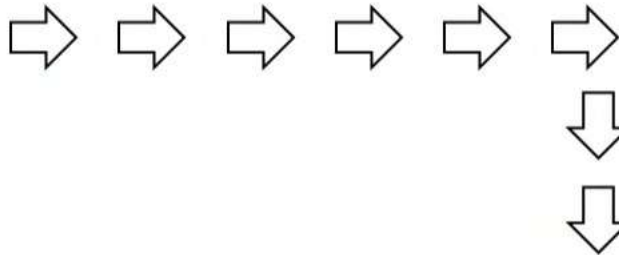
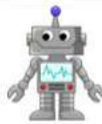
## Reading Code – Creating Programs

**Question**

Read the code and create the program

Example**Code**

go right 4  
go down 2  
open door



Robot moved \_\_\_\_\_ squares

1.

**Code**

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

Robot moved \_\_\_\_\_ squares



2.

**Code**

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



Robot moved \_\_\_\_\_ squares



# Reading Code – Creating Programs

**Question**

Read the code and draw the path the robot will take

1.

Code

go left 3  
go down 3  
go left 3  
go up 3  
open door

Robot moved \_\_\_\_\_ squares



2.

Code

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

Robot moved \_\_\_\_\_ squares



3.

Code

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

Robot moved \_\_\_\_\_ squares



## Activity: Dance Party Code

### Objective

What are we learning about?

Students will write a sequence of dance moves to create a short dance routine, practicing sequential events, and then alter the sequence to observe how changes affect the performance.

### Materials

What you will need for the activity.

- Worksheet for writing dance moves (one per student)
- Pencil or crayon for drawing
- Open space in the classroom for dancing
- Optional: Music for a fun atmosphere



### Instructions

How you will complete the activity.

1. Tell students they'll be "coders" creating a dance routine by writing a sequence of dance moves.
2. Show them a few simple dance moves (e.g., jump, clap, twirl, stomp) they can use.
3. Give each student a worksheet (or put them in pairs/small groups) to write a short sequence of 3 or 4 dance moves (e.g., "jump, clap, twirl").
4. Have one student/pair/group read their sequence aloud and perform their dance for the class.
5. Repeat with 1-2 more students/groups, having them share and perform.
6. Wrap up by explaining how the order of moves affect the dance, connecting it to coding sequences.



**Example Moves**

Choose from the example moves below or make up your own.

Dance Move	Description
Jump	Hop off the ground with both feet.
Clap	Clap hands together once or twice.
Twirl	Spin around in a circle on the spot.
Stamp	Stamp one foot on the ground.
Leap	Jump on one foot.
Wiggle	Shake your whole body side to side.
Wave	Wave one hand in the air.
Step Forward	Take one step forward.
Step Backward	Take one step backward.
Spin	Turn around quickly in a circle.
Sway	Rock side to side with your feet.
Tap	Tap one foot lightly on the ground.
Bounce	Bend knees and bounce up and down.
March	Lift knees high and march in place.
Shake	Shake arms or hips side to side.
Point	Point one finger up or to the side.
Kick	Kick one leg forward gently.
Nod	Nod your head up and down.
Twist	Twist your hips side to side.
Reach	Stretch both arms up high.

Name: \_\_\_\_\_

185

Curriculum Connection  
C3.1

## Dance Party Code – My Code

### Instructions

Program your own dance by writing your dance sequence.  
(Ex. kick, twirl, step forward, step backward, kick, twirl, step forward, step backward)

### My Dance Party Code

**PREVIEW**

# Fixing Code

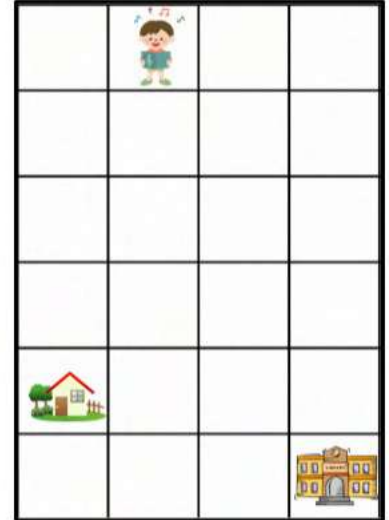
## Question

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

1. Go to school and then home

### Code

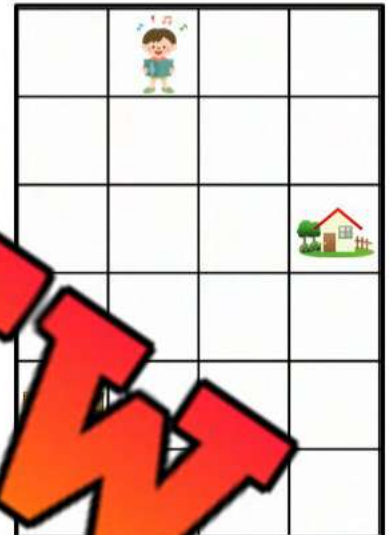
- \_\_\_\_\_ - go up 1
- \_\_\_\_\_ - go down 5
- \_\_\_\_\_ - go right 1
- \_\_\_\_\_ - go left 3
- \_\_\_\_\_ - enter school



2. Go to school and then home

### Code

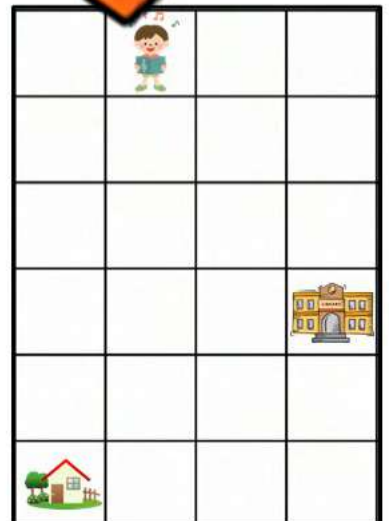
- \_\_\_\_\_ - go up 2
- \_\_\_\_\_ - go down 4
- \_\_\_\_\_ - go right 3
- \_\_\_\_\_ - enter school
- \_\_\_\_\_ - go left 1
- \_\_\_\_\_ - enter home



3. Go to school and then home

### Code

- \_\_\_\_\_ - go down 2
- \_\_\_\_\_ - go down 3
- \_\_\_\_\_ - go right 2
- \_\_\_\_\_ - enter school
- \_\_\_\_\_ - go left 3
- \_\_\_\_\_ - enter home





# Interpreting Code

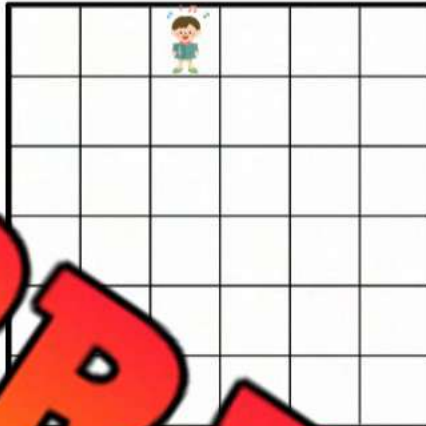
**Question**

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

1.

**Code**

go down 5  
go right 2  
enter library



YES NO

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

2.

**Code**

go down 4  
go right 4  
enter library



YES NO

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

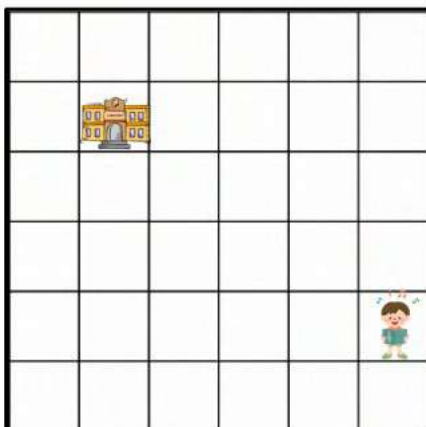
Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

3.

**Code**

go up 3  
go right 4  
enter library



YES NO

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

Line 5: \_\_\_\_\_

Line 6: \_\_\_\_\_

## Activity: Draw a Picture Sequence

### Objective

What are we learning about?

Students will write a sequence of steps to draw a simple picture and identify and fix an error in a given sequence, practicing how to create, follow, and debug sequential events.

### Materials

What you will need for the activity.

- Worksheet with a pre-written sequence of drawing steps (containing one error), space to write a corrected sequence, and a blank area to draw (one per student)



### Instructions

How you will run the activity

1. Tell students they'll be "debugging" by writing a sequence of drawing steps, and they'll also fix mistakes in a sequence.
2. Show them a correct smiley face on the board and explain the steps (e.g., "draw a circle, add two eyes, draw a smile").
3. Give each student the worksheet with a pre-written sequence with errors (e.g., "draw a square, add two eyes, draw a smile"—the error is "draw a square" instead of "draw a circle").
4. Ask students to follow the given sequence and draw the picture at the end of their worksheet.
5. Discuss as a class why the drawing doesn't look like it should (e.g., it has a square head instead of a round one).
6. Have students identify the errors and write a corrected sequence on their worksheet (e.g., "draw a circle, add two eyes, draw a smile").
7. Ask them to draw the picture again using their corrected sequence.
8. Have a few students share their corrected sequence and new drawing, discussing how fixing the errors made the picture correct.
9. Wrap up by explaining how finding and fixing mistakes is part of coding, just like they debugged their drawing sequence.

**Instructions**    **First Drawing – With Errors:** Follow the code and draw the picture below.

Step	Instruction
1	print: draw a large triangle on the bottom of the page for the mountain
2	print: draw a small square above the mountain for the cloud
3	print: draw a small circle on the bottom left of the mountain for the sun
4	print: draw a tall rectangle on the right of the mountain for the tree trunk
5	print: draw a small triangle on top of the tree trunk for the tree leaves
6	print: draw a small semi-circle above the tree for the bird
7	print: draw a small semi-circle connected to the other one for the bird
8	print: draw a small line on the mountain for a path



**Instructions**

Place a checkmark if the code is written correctly and an "x" if it is wrong. Then re-draw the picture the correct way.

Step	Instruction	✓ ✗
1	print: draw a large triangle on the bottom of the page for the mountain	
2	print: draw a small square above the mountain for the cloud	
3	print: draw a small circle on the bottom left of the mountain for the snake	
4	print: draw a tall rectangle on the right of the mountain for the tree	
5	print: add a small triangle on top of the tree trunk for the tree leaves	
6	print: draw a small circle above the tree for the bird	
7	print: draw a smaller circle connected to the other one for the bird's beak	
8	print: draw a small line from the mountain to the tree for a path	

## Working with Code

**Question**

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

1.

**Code**

Code1 = "VE"

Code2 = "LO"

Code3 = "ER"

Code4 = "E"

Code5 = "E"

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

The Computer Program:I LOVE CODE

2.

**Code**

Code1 = "F"

Code2 = "UN"

Code3 = "TH"

Code4 = "MA"

Code5 = "IS"

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

---

---

---

---

---

3.

**Code**

Code1 = "A"

Code2 = "PRO"

Code3 = "MER"

Code4 = "GRAM"

Code5 = "ING"

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

The Computer Program:

---

---

---

---

---

## Working with Code

### Code Bank

JillPeriod1 = 3

JillPeriod2 = 7

JillPeriod3 = 5

JillTotal = JillPeriod1 + JillPeriod2 +

JillPeriod3

JillShots = 15

### Example - The Computer Program:

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

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

Question Use the Code Bank to read the codes. Write what the program will say.

### 1. Code

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

### The Computer Program:

### 2. Code

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

### The Computer Program:

### 3. Code

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

### The Computer Program:



Name: \_\_\_\_\_

## Coding Quiz

### Part 1

Write the code below



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

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Robot moved \_\_\_\_\_

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

Line 1: \_\_\_\_\_

Line 2: \_\_\_\_\_

Line 3: \_\_\_\_\_

Line 4: \_\_\_\_\_

Line 5: \_\_\_\_\_



Robot moved \_\_\_\_\_ squares

### Part 2

Read the code and create the program

3.

#### Code

go down 2

go right 1

go down 2

go right 5

open door



Robot moved \_\_\_\_\_ squares



### Part 3

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

4. Go to school and then home

#### Code

- \_\_\_\_\_ - go up 2
- \_\_\_\_\_ - go down 5
- \_\_\_\_\_ - go right 1
- \_\_\_\_\_ - enter school
- \_\_\_\_\_ - go
- \_\_\_\_\_ - home



### Part 4

Write the code that will work. Write yes or no. Re-write any code that won't work

5.

#### Code

- go down 5
- go right 2
- enter library
- go left 5
- open door



YES NO

Line 1: \_\_\_\_\_  
 Line 2: \_\_\_\_\_  
 Line 3: \_\_\_\_\_  
 Line 4: \_\_\_\_\_  
 Line 5: \_\_\_\_\_

### Part 5

Write the message that the code has programmed

6.

#### Code

Code1 = "DE"  
 Code2 = "TO"  
 Code3 = "I"  
 Code4 = "CO"

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

The Computer Program:

\_\_\_\_\_  
 \_\_\_\_\_