



1. Continue this pattern by writing the next 3 numbers for each pattern in the table below:

Start of the Pattern	What comes next?		
a. 3, 6, 9, 12			
b. 2, 5, 8, 11			
c. 1, 4, 7, 10			

2. Can you identify the pattern rules from question 1?
Show how you know.

3, 6, 9, 12

Pattern Rule:

2, 5, 8, 11

Pattern Rule:

1, 4, 7, 10

Pattern Rule:



3. What are the next 3 shapes in this pattern?

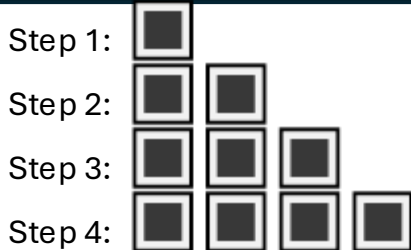


4. Which pattern has an ABB rule?

- a.         
- b.         
- c.         
- d.         

5. Can you fill in the table below using the patterns from question 4?

Original Pattern	Pattern Rule	Continue the Pattern (6 more cars)
a.   		
b.   		
c.   		
d.   		



Step 5:

7. Which of the following is a growing pattern?





8. I'm thinking of a pattern that uses 2 shapes and follows an AAB rule.
What could my pattern look like?

9. I'm thinking of a pattern that uses 3 shapes and follows an ABBC rule.
What could my pattern look like?

10. Can you create a growing pattern using only 2 shapes?



11. There is a mistake in this pattern:

2, 4, 6, 9, 10, 12

What is the mistake and how do you know?

What can you change to correct the pattern?

12. I'm thinking of a pattern that counts by 5s but doesn't start at 5.

What could the pattern be? How do you know it follows the rule?



13. Take a look at this number pattern:

1, 2, 4, 7, 11, ____

What could the next number be? Explain how you figured it out.

14. There is a mistake in this pattern:

10, 20, 30, 50, 60

What do you think the mistake is? Could there be more than one way to fix it?



1. Can you solve the equations (number sentences) below?

EQUATION	SOLUTION
a.  + 4 = 9	 =
b. 3 +  = 10	 =
c. 12 =  + 6	 =
d. 11 -  = 6	 =
e.  - 10 = 15	 =

2. Fill in the blank:

$$5 + \square = 10$$

$$\square = \underline{\hspace{2cm}}$$

3. Which of these number sentences is correct (balanced)?

- a. $6 + 2 = 7$
- b. $4 + 3 = 8$
- c. $5 + 5 = 10$
- d. $3 + 3 = 5$



4. Can you match the unknowns in each of the questions in the left column with an answer from the right column? Draw lines to show your matches.

Questions	Answers
$\square + 3 = 12$	2
$4 + \square = 6$	4
$10 + \square = 15$	3
$\square - 3 = 7$	9
$14 - \square = 10$	8
$\square + 8 = 11$	6
$19 - \square = 11$	10
$14 + \square = 20$	5

5. What number makes this true?

$$\square - 3 = 4$$

$$\square = \underline{\hspace{2cm}}$$



6. Which equation shows the same total as $7 + 2$?

- a. $8 + 2$
- b. $6 + 3$
- c. $5 + 1$
- e. $4 + 2$

7. What number makes this true?

$$8 = 5 + \square$$

$$\square = \underline{\quad\quad}$$



8. Look at this equation:

$$4 + \square = 9$$

What number belongs in the box? Can you show how you figured it out?

9. What are two different ways to make the number 8 using addition?
Can you show both with pictures or tools?

10. Look at this equation: $6 + \text{🐰} = 9$

If I told you that $\text{🐰} = 2$, that answer would be wrong.

How can you show that 🐰 does not equal 2?



11. I had 4 red apples 🍎. I picked some green apples 🍏 and I had 9 apples in total. How many green apples did I pick? Can you draw a diagram to answer this question?

12. There's a mistake in this number sentence:

$$6 + 3 = 10$$

What might the mistake be? How would you fix it?