

Grade 5 · Patterns and Relationships · Worksheet

Common Core 5.OA.B.3 · mathovore.fr

Name: _____ Date: ____/____/____ Score: _____

These 24 problems practice Common Core 5.OA.B.3. Students generate two numerical patterns from two rules, line up corresponding terms, and find relationships such as "2 times" or "1 more."

Later problems write ordered pairs, graph them on the first quadrant of the coordinate plane, and apply patterns to savings, packs, blocks, and bike rides.

Grade 5 Common Core: 5.OA.B.3

Problem 1: Start at 0, add 3

Write the first five terms of the pattern that starts at 0 and follows the rule "add 3."

Rule: start at 0, add 3



Fill in the missing terms.

Problem 2: Start at 0, add 5

Write the first five terms of the pattern that starts at 0 and follows the rule "add 5."

Problem 3: Start at 4, add 2

Write the first five terms of the pattern that starts at 4 and follows the rule "add 2."

Problem 4: Start at 1, add 7

Write the first five terms of the pattern that starts at 1 and follows the rule "add 7."

Problem 5: Complete the table

Pattern A starts at 0 and adds 2. Pattern B starts at 0 and adds 4. Complete the table with the first six terms of each pattern.

Term number	1	2	3	4	5	6
A: add 2						
B: add 4						

Write the six terms of each pattern.

Problem 6: Add 5 and add 10

Pattern A starts at 0 and adds 5. Pattern B starts at 0 and adds 10. Write the first five terms of each pattern. Then tell how each term of B relates to the corresponding term of A.

Problem 7: Add 3 and add 9

Pattern A starts at 0 and adds 3. Pattern B starts at 0 and adds 9. Write the first six terms of each pattern. Then tell how each term of B relates to the corresponding term of A.

Problem 8: Add 4 and add 8

Pattern A starts at 0 and adds 4. Pattern B starts at 0 and adds 8. Write the first five terms of each pattern. Then tell how each term of B relates to the corresponding term of A.

Problem 9: A is a multiple of B

Pattern A is 0,6,12,18,24. Pattern B is 0,2,4,6,8. Tell how each term of A relates to the corresponding term of B.

Problem 10: B is one more

Pattern A is 0,2,4,6,8. Pattern B is 1,3,5,7,9. Describe the rule for each pattern and how the corresponding terms are related.

Problem 11: Add 10 and add 5

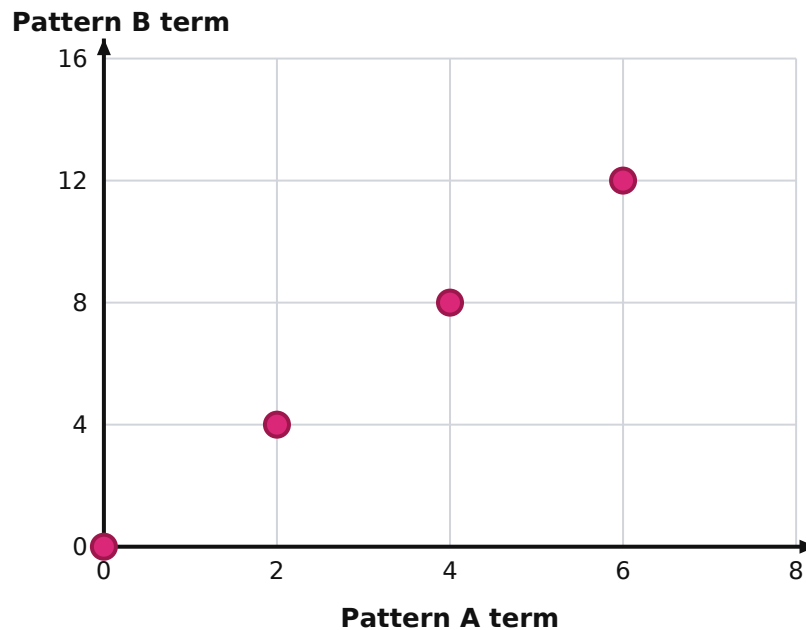
Pattern A starts at 0 and adds 10. Pattern B starts at 0 and adds 5. Write the first five terms of each pattern and describe how B relates to A.

Problem 12: Write ordered pairs

Pattern A is 0,3,6,9. Pattern B is 0,6,12,18. Write the ordered pairs formed by the corresponding terms.

Problem 13: Read a graph

The graph shows four points made from corresponding terms of two patterns.

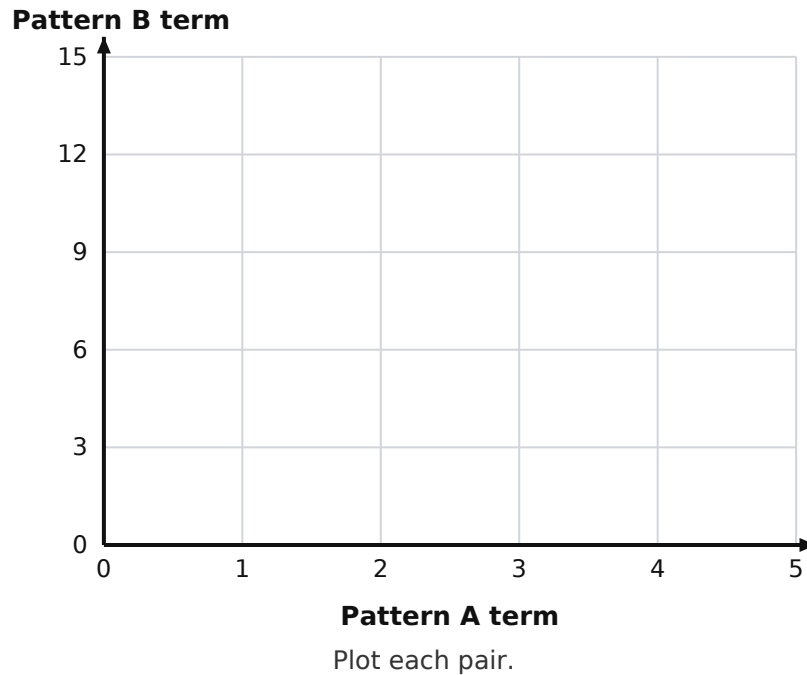


Points from pattern A (across) and pattern B (up).

- Write the ordered pairs.
- Find the rule for each pattern.
- Describe how corresponding terms are related.

Problem 14: Plot the pairs

Pattern A starts at 0 and adds 1. Pattern B starts at 0 and adds 3. Write the first five ordered pairs and plot them on the grid.



Problem 15: Graph and describe

Pattern A starts at 0 and adds 5. Pattern B starts at 0 and adds 10. Graph the first four ordered pairs on your own coordinate plane. Describe what you notice about the points.

Problem 16: Is it a pair?

Pattern A starts at 0 and adds 3. Pattern B starts at 0 and adds 6. Tell whether each ordered pair is formed by corresponding terms. Explain.

- a. (12,24)
- b. (9,12)

Problem 17: Find missing terms

Pattern A is 0,4,8,?,16. Pattern B is 0,8,?,24,32. Find the missing terms.

Problem 18: Seventh terms

Pattern A starts at 0 and adds 6. Pattern B starts at 0 and adds 3. Find the 7th term of each pattern. Then tell how the 7th terms are related.

Problem 19: Saving each week

Priya and Diego each start with \$0 in a savings jar. Priya adds \$4 each week. Diego adds \$8 each week. Write the first five amounts for each person and describe how the amounts are

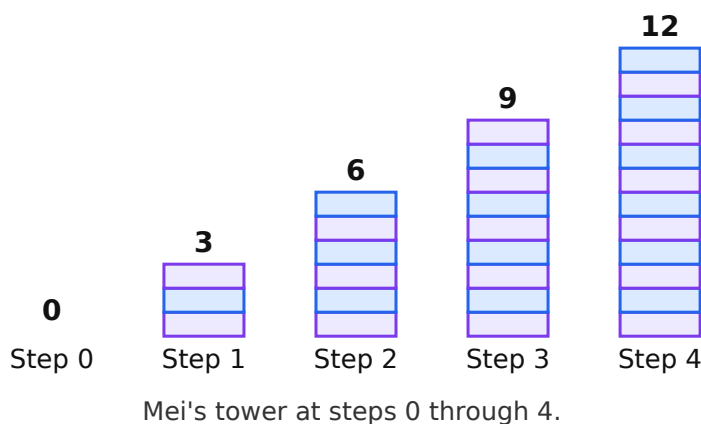
related.

Problem 20: School store packs

At the school store, each pack has 6 pencils and 2 erasers. Pattern A counts pencils in 1, 2, 3, and 4 packs. Pattern B counts erasers. Write both patterns, then write the ordered pairs (pencils, erasers) and describe the relationship.

Problem 21: Block towers

Mei builds a tower. She starts with no blocks and adds 3 blocks at each step. Liam also starts with no blocks, but he adds 6 blocks at each step.



- Write the first five terms of each pattern.
- Write the ordered pairs (Mei, Liam).
- Describe the relationship between Mei's blocks and Liam's blocks.

Problem 22: Different starting numbers

Pattern A starts at 2 and adds 3. Pattern B starts at 4 and adds 6. Write the first five terms of each pattern and describe how corresponding terms are related.

Problem 23: Bike miles

Noah rides his bike 2 miles each day. Maya rides 6 miles each day. They both start counting at 0 miles. Write the first six totals for each rider as ordered pairs (Noah, Maya). How many miles has Maya ridden when Noah has ridden 8 miles?

Problem 24: Find the mistake

Pattern A starts at 0 and adds 4. Pattern B starts at 0 and adds 8. Hannah says, "Each term of B is 4 more than the corresponding term of A." Explain why Hannah is wrong and state the

correct relationship.