LESSON MAKER PRO

Pattern Pair Power

Match patterns, make pairs, and graph the connections.

GRADE 5 · 5.OA.B.3

CCSS.Math.Content.5.OA.B.3 "Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns..."

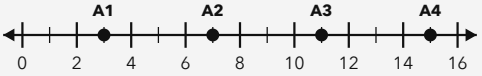
NAME _____ DATE _____

MATCH TERM BY TERM

Match the first term in one pattern with the first term in the other pattern. Write the first pattern number first in each ordered pair, then look for how the two numbers are connected.

WORKED EXAMPLE

The number line shows the first four terms of Pattern A. Pattern B starts at 6 and adds 8. Write four ordered pairs. What relationship do you notice?



1. Read Pattern A: 3, 7, 11, 15.
2. Make Pattern B: 6, 14, 22, 30.
3. Match terms in the same positions.
4. Compare each B term to its A term.

Answer: (3, 6), (7, 14), (11, 22), (15, 30). Each Pattern B term is twice the matching Pattern A term.

PRACTICE 4 problems

1 Pattern A starts at 4 and adds 3. Pattern B starts at 10 and adds 6. Write the first four ordered pairs. Describe the relationship.

ANSWER _____

2 Pattern A is 5, 10, 15, 20. Pattern B is 7, 12, 17, 22. Write each rule. Then describe the relationship.

ANSWER _____

3 Pattern A starts at 0 and adds 4. Pattern B starts at 1 and adds 8. Write the first four ordered pairs.

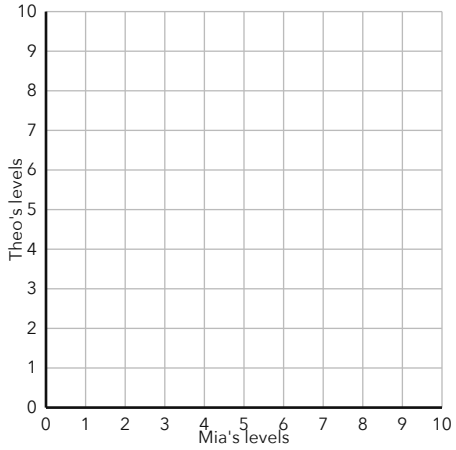
ANSWER _____

4 Pattern A starts at 9 and adds 2. Pattern B starts at 20 and adds 3. After four terms, how much has each pattern increased? What does this show?

ANSWER _____

APPLY IT Show your work

1 At coding club, Mia earns 1 level each round. Theo earns 2 levels each round. Both start at 0. On the grid, plot rounds 0 through 5 as (Mia's levels, Theo's levels). What relationship do the points show?



ANSWER _____

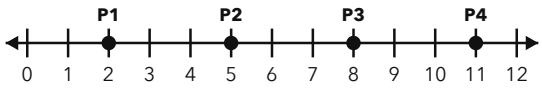
2 Ava's sticker collection starts with 8 stickers and grows by 4 each week. Ben's pin collection starts with 3 pins and grows by 6 each week. Write the first four ordered pairs as (stickers, pins). Describe the connection.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The number line shows the first four terms of Pattern P. Pattern Q starts at 4 and adds 9. Write four ordered pairs as (P, Q). Explain a rule that connects each Q term to its matching P term.



WORK SPACE AND ANSWER

ANSWER KEY

Pattern Pair Power

GRADE 5 · 5.OA.B.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Pattern A starts at 4 and adds 3. Pattern B starts at 10 and adds 6. Write the first four ordered pairs. Describe the relationship.	**(4, 10), (7, 16), (10, 22), (13, 28). Each Pattern B term is twice the Pattern A term, plus 2.**
2	Pattern A is 5, 10, 15, 20. Pattern B is 7, 12, 17, 22. Write each rule. Then describe the relationship.	**Pattern A: add 5. Pattern B: add 5. Each Pattern B term is 2 more than the matching Pattern A term.**
3	Pattern A starts at 0 and adds 4. Pattern B starts at 1 and adds 8. Write the first four ordered pairs.	**(0, 1), (4, 9), (8, 17), (12, 25)**
4	Pattern A starts at 9 and adds 2. Pattern B starts at 20 and adds 3. After four terms, how much has each pattern increased? What does this show?	**Pattern A increased by 6. Pattern B increased by 9. Pattern B gains 3 each time Pattern A gains 2.**

PART 2 · APPLY IT

1. **(0, 0), (1, 2), (2, 4), (3, 6), (4, 8), (5, 10). Theo's level total is twice Mia's level total.** List both totals after each round and match totals from the same round. Plot each matching pair on the grid.
2. **(8, 3), (12, 9), (16, 15), (20, 21). Ben's collection gains 6 while Ava's gains 4, so Ben gains 2 more items each week.** Generate four terms for each collection, including the starting amount. Match terms from the same week.

CHALLENGE

(2, 4), (5, 13), (8, 22), (11, 31). Each Q term is 3 times the matching P term, minus 2.

Accept equivalent relationship statements, such as “double plus 2” or “2 more.” Ordered pairs must list the first pattern value first.