LESSON MAKER PRO

Pattern Pair Quest

Build patterns, match values, and plot points.

GRADE 5 · MT.5.OA.3

MT.5.OA.3 "Generate two numerical patterns using given rules and complete an input-output table for the data, identify apparent relationships between corresponding terms, form ordered pairs from the values in the input-output table..."

NAME _____ DATE _____

MATCH EACH TURN

Use each rule to make a pattern. Match values from the same turn to make an ordered pair, then plot each pair on a coordinate plane.

WORKED EXAMPLE

Use the table. How is B related to A? Write the last ordered pair.

A	B
1	5
4	11
7	17

1. A grows by 3. B grows by 6.
2. Each B value is twice A plus 3.
3. The last row makes the pair (7, 17).

Answer: B is twice A plus 3; (7, 17).

PRACTICE 4 problems

1 A starts at 2 and adds 4. B starts at 3 and adds 6. List the first four terms of each pattern.

ANSWER _____

2 A starts at 0 and adds 5. B starts at 0 and adds 10. Find the fourth term of each. How is B related to A?

ANSWER _____

3 A: 2, 5, 8. B: 7, 10, 13. Write the three ordered pairs (A, B).

ANSWER _____

4 A starts at 0 and adds 4. B starts at 2 and adds 4. Write the first three ordered pairs (A, B).

ANSWER _____

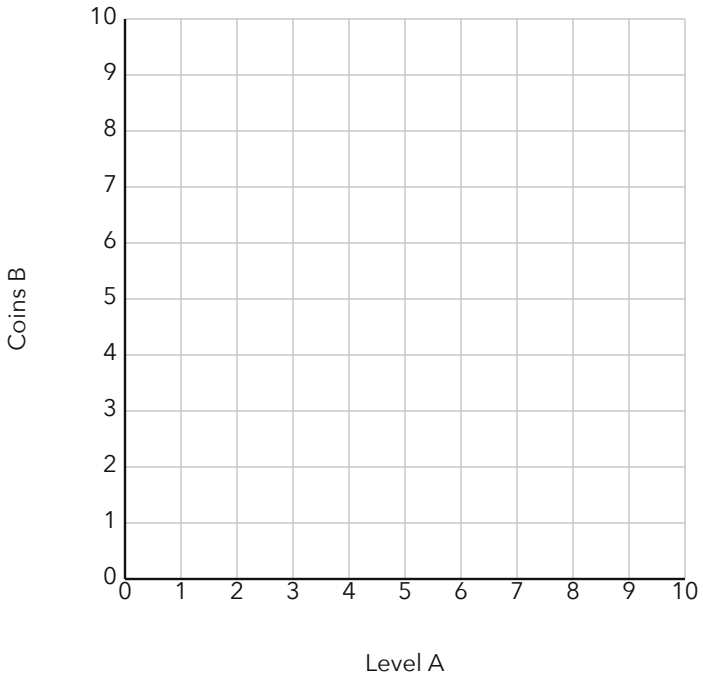
APPLY IT Show your work

1 At a game booth, tickets A start at 0 and grow by 3 each turn. Points B start at 0 and grow by 9. Fill the table. How is B related to A?

Tickets A	Points B
0	0
3	___
6	___
9	___

ANSWER _____

2 In a game, level A starts at 0 and rises by 1. Coins B start at 1 and rise by 2 each level. Write and plot the first five (A, B) pairs. How is B related to A?



ANSWER _____

CHALLENGE One step up

A starts at 2 and adds 3. B starts at 9 and adds 6. A classmate says B is twice A. Give the fourth pair and correct the claim.

WORK SPACE AND ANSWER

ANSWER KEY

Pattern Pair Quest

GRADE 5 · MT.5.OA.3

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A starts at 2 and adds 4. B starts at 3 and adds 6. List the first four terms of each pattern.	**A: 2, 6, 10, 14. B: 3, 9, 15, 21.**
2	A starts at 0 and adds 5. B starts at 0 and adds 10. Find the fourth term of each. How is B related to A?	**Fourth terms: A = 15, B = 30. B is twice A.**
3	A: 2, 5, 8. B: 7, 10, 13. Write the three ordered pairs (A, B).	**(2, 7), (5, 10), (8, 13).**
4	A starts at 0 and adds 4. B starts at 2 and adds 4. Write the first three ordered pairs (A, B).	**(0, 2), (4, 6), (8, 10).**

PART 2 · APPLY IT

1. **Missing B values: 9, 18, 27. B is three times A.** Add 9 down the B column. Each B value is three times its matching A value.
2. **(0, 1), (1, 3), (2, 5), (3, 7), (4, 9). B is twice A plus 1.** Increase A by 1 and B by 2 for each new pair. Plot the five pairs; each B value is twice A plus 1.

CHALLENGE

The fourth pair is (11, 27). B is twice A plus 5, not twice A.

Accept words or an equivalent numerical rule for each relationship. On the grid, accept clearly marked points without a connecting line.