LESSON MAKER PRO

Pattern Pairs

Build tables, compare outputs, and plot pairs.

GRADE 5 · 5.OA.B.2

5.OA.B.2 "Generate two numerical patterns using two given rules and complete an input/output table for the data. a. Use data from an input/output table to identify apparent relationships between corresponding terms. b..."

NAME _____ DATE _____

TWO RULES, ONE PAIR

Apply both rules to each input and put the outputs in the same row. Write the outputs as (A, B). On a coordinate grid, move across to A and up to B.

WORKED EXAMPLE

A is 7 times the input. B is 9 times the input. Complete the last row and write its ordered pair (A, B).

TWO PATTERNS

Input	A	B
1	7	9
2	14	18
3	___	___

1. A: 3 × 7 = 21.
2. B: 3 × 9 = 27.
3. Pair the outputs: (21, 27).

Answer: Last row: 3, 21, 27. Ordered pair: (21, 27).

PRACTICE 4 problems

1 A is 2 times the input. B is 3 times the input. Complete both rows: input 2, A ___, B ___; input 4, A ___, B ___.

ANSWER _____

2 A starts at 2 and adds 3 each step. B starts at 4 and adds 6 each step. What are the third terms?

ANSWER _____

3 A is the input plus 2. B is the input plus 5. Write the pair (A, B) for input 4.

ANSWER _____

4 At input 5, A is 4 times the input and B is 2 times the input. How is B related to A? Show both outputs.

ANSWER _____

APPLY IT Show your work

1 At an arcade, Game A earns 2 tickets per round. Game B earns 4 tickets per round. Complete the last row. How are B's totals related to A's?

ARCADE TICKETS

Rounds	Game A	Game B
1	2	4
2	4	8
3	___	___

ANSWER _____

2 Mia walks 3 laps each day, and Leo walks 5 laps each day. Complete the last row. What is the pair (Mia, Leo) for day 4?

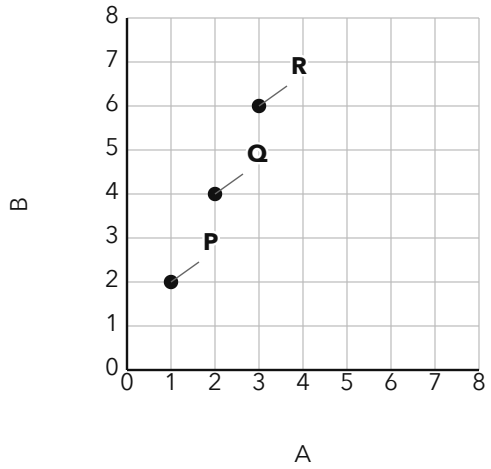
TOTAL LAPS

Day	Mia	Leo
1	3	5
2	6	10
4	___	___

ANSWER _____

CHALLENGE One step up

A adds 1 and B adds 2 at each step. Extend the plotted patterns by one step. Plot the next pair (A, B), then explain how B relates to A.



WORK SPACE AND ANSWER

ANSWER KEY

Pattern Pairs

GRADE 5 · 5.OA.B.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	A is 2 times the input. B is 3 times the input. Complete both rows: input 2, A ___, B ___; input 4, A ___, B ___.	**Input 2: A = 4, B = 6. Input 4: A = 8, B = 12.**
2	A starts at 2 and adds 3 each step. B starts at 4 and adds 6 each step. What are the third terms?	**A = 8; B = 16.**
3	A is the input plus 2. B is the input plus 5. Write the pair (A, B) for input 4.	**(6, 9)**
4	At input 5, A is 4 times the input and B is 2 times the input. How is B related to A? Show both outputs.	**A = 20 and B = 10, so B is half of A.**

PART 2 · APPLY IT

1. **Last row: 3, 6, 12. B's total is twice A's.** Multiply 3 rounds by each game's tickets per round. Compare 12 with 6.
2. **Last row: 4, 12, 20. Ordered pair: (12, 20).** Multiply 4 days by each person's laps per day, then pair the totals in the requested order.

CHALLENGE

Plot (4, 8). B is twice A at every plotted pair.

For relationship questions, accept equivalent wording such as "A is half of B." Check that the challenge point is at x = 4, y = 8.