LESSON MAKER PRO

Pattern Pairs

Build tables to show how numbers change.

GRADE 4 · 4.A.1.1

4.A.1.1 "Create an input/output chart or table to represent or extend a numerical pattern."

NAME _____ DATE _____

INPUT TO OUTPUT

A rule tells how to turn an input into an output. Write each input beside its output in a two-column table. Use the same rule to add a new row.

WORKED EXAMPLE

Find the rule. Fill in the missing output.

Input	Output
14	43
17	52
19	___

1. Try 14 × 3 + 1 = 43.
2. Check: 17 × 3 + 1 = 52.
3. Use the rule: 19 × 3 + 1 = 58.

Answer: 58

PRACTICE 4 problems

1 Make an input/output table for inputs 2 and 5. Add 6 to each input.

ANSWER _____

2 Make an input/output table for inputs 3 and 6. Multiply each input by 6.

ANSWER _____

3 Make an input/output table for inputs 24 and 32. Subtract 8 from each input.

ANSWER _____

4 Input 2 gives output 10. Input 5 gives output 25. Use the same rule to make a table for inputs 8 and 11.

ANSWER _____

APPLY IT Show your work

1 Mia earns tickets at an arcade. Add a row for round 4. How many tickets has she earned after round 4?

MIA'S TICKETS

Round	Tickets in all
1	6
2	12
3	18

ANSWER _____

2 A pet shelter puts 4 stickers on each adoption card. Make an input/output table for 1, 3, and 5 cards. How many stickers go on 5 cards?

WORK SPACE

ANSWER _____

CHALLENGE One step up

These input/output pairs follow one rule: 2 and 11, 5 and 23, 8 and 35. Make a table with all three pairs and a new row for input 11. Explain how you found its output.

WORK SPACE AND ANSWER

ANSWER KEY

Pattern Pairs

GRADE 4 · 4.A.1.1

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Make an input/output table for inputs 2 and 5. Add 6 to each input.	**Input 2, output 8; input 5, output 11.**
2	Make an input/output table for inputs 3 and 6. Multiply each input by 6.	**Input 3, output 18; input 6, output 36.**
3	Make an input/output table for inputs 24 and 32. Subtract 8 from each input.	**Input 24, output 16; input 32, output 24.**
4	Input 2 gives output 10. Input 5 gives output 25. Use the same rule to make a table for inputs 8 and 11.	**Input 8, output 40; input 11, output 55.**

PART 2 · APPLY IT

1. **Round 4, 24 tickets in all.** The total rises by 6 tickets each round. Add 6 to 18.
2. **1 card, 4 stickers; 3 cards, 12 stickers; 5 cards, 20 stickers. Answer: 20 stickers.** Multiply each number of cards by 4. For 5 cards, 5 × 4 = 20.

CHALLENGE

Input 2, output 11; input 5, output 23; input 8, output 35; input 11, output 47. Each time the input rises by 3, the output rises by 12, so 35 + 12 = 47.

Accept tables with either column order if every input is paired with its correct output. For the challenge, also accept the rule: multiply the input by 4, then add 3.