LESSON MAKER PRO

Rule Table Quest

Follow each rule and record the input-output pairs.

GRADE 5 · MA.5.AR.3.2

MA.5.AR.3.2 "Given a rule for a numerical pattern, use a two-column table to record the inputs and outputs."

NAME _____ DATE _____

USE THE RULE

A two-column table keeps inputs in the left column and outputs in the right column. Start with each input, follow the rule, and write the result beside that input.

WORKED EXAMPLE

Use the rule subtract 7. Complete the output column.

INPUT-OUTPUT TABLE

Input	Output
11	___
13	___
15	___

1. Start with the rule: subtract 7.
2. 11 - 7 = 4.
3. 13 - 7 = 6, and 15 - 7 = 8.
4. Write each result in the output column.

Answer: 11 → 4, 13 → 6, 15 → 8

PRACTICE 6 problems

1 Make a two-column table. Rule: add 9. Use inputs 0, 1, and 3.

ANSWER _____

2 Make a two-column table. Rule: multiply by 2. Use inputs 5, 9, and 10.

ANSWER _____

3 Make a two-column table. Rule: add 12. Use inputs 0, 2, and 5.

ANSWER _____

4 Make a two-column table. Rule: double the input, then add 1. Use inputs 0, 1, and 2.

ANSWER _____

5 Make a two-column table. Rule: multiply by 9. Use inputs 0, 1, and 2.

ANSWER _____

6 Make a two-column table. Rule: add 14. Use inputs 0, 2, and 3.

ANSWER _____

APPLY IT Show your work

1 A game app gives you 5 starter coins. You earn 9 more coins for each level you finish. Make a two-column table for 0, 1, 2, and 3 levels. How many coins will you have after 3 levels?

WORK SPACE

ANSWER _____

2 In a playlist challenge, you earn 12 points for each song you review. Make a two-column table for 1, 2, 3, and 5 songs. How many points do you earn for 5 songs?

WORK SPACE

ANSWER _____

CHALLENGE One step up

Make a two-column table using this rule: multiply the input by 5, then add 2. Use inputs 2, 3, 5, and 9. Explain why the output for input 9 is 47.

WORK SPACE AND ANSWER

ANSWER KEY

Rule Table Quest

GRADE 5 · MA.5.AR.3.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Make a two-column table. Rule: add 9. Use inputs 0, 1, and 3.	**0 → 9, 1 → 10, 3 → 12**
2	Make a two-column table. Rule: multiply by 2. Use inputs 5, 9, and 10.	**5 → 10, 9 → 18, 10 → 20**
3	Make a two-column table. Rule: add 12. Use inputs 0, 2, and 5.	**0 → 12, 2 → 14, 5 → 17**
4	Make a two-column table. Rule: double the input, then add 1. Use inputs 0, 1, and 2.	**0 → 1, 1 → 3, 2 → 5**
5	Make a two-column table. Rule: multiply by 9. Use inputs 0, 1, and 2.	**0 → 0, 1 → 9, 2 → 18**
6	Make a two-column table. Rule: add 14. Use inputs 0, 2, and 3.	**0 → 14, 2 → 16, 3 → 17**

PART 2 · APPLY IT

1. **0 → 5, 1 → 14, 2 → 23, 3 → 32; 32 coins** Use the rule multiply the number of levels by 9, then add 5. For 3 levels, 3 multiplied by 9 plus 5 equals 32.
2. **1 → 12, 2 → 24, 3 → 36, 5 → 60; 60 points** Use the rule multiply the number of songs by 12. For 5 songs, 5 multiplied by 12 equals 60.

CHALLENGE

2 → 12, 3 → 17, 5 → 27, 9 → 47. For input 9, 9 multiplied by 5 equals 45, and 45 plus 2 equals 47.

Accept tables with inputs and matching outputs in either column order if every pair is correct. Accept correct written multiplication or repeated-addition reasoning for the challenge explanation.