LESSON MAKER PRO

Rule Detectives

Find the rule, then use it.

GRADE 5 · 5.OA.B

CCSS.Math.Content.5.OA.B "Analyze patterns and relationships."

NAME _____ DATE _____

SPOT THE RULE

A pattern follows the same rule each time. Look at input-output pairs to find what happens to each input.

WORKED EXAMPLE

Rule: multiply by 5. What is the output for 7?

1. Start with 7.
2. 7 times 5 = 35.
3. The output is 35.

Answer: 35

PRACTICE 5 problems

1 Rule: add 8. Input: 26. Output: ___

ANSWER _____

2 Rule: multiply by 3. Input: 12. Output: ___

ANSWER _____

3 2 gives 18. 3 gives 27. What does 4 give?

ANSWER _____

4 Rule: subtract 11. The output is 29. What is the input?

ANSWER _____

5 Pattern A: 10, 14, 18. Pattern B: 13, 17, 21. How much greater is each Pattern B term?

ANSWER _____

APPLY IT Show your work

1 A game team earns 24 points for each level it finishes. It finishes 6 levels. Write the rule and find its points.

WORK SPACE

ANSWER _____

2 A skateboarder makes 9 jumps on Monday, 13 on Tuesday, and 17 on Wednesday. If the pattern continues, how many jumps will the skateboarder make on Thursday?

WORK SPACE

ANSWER _____

CHALLENGE One step up

CHALLENGE

Inputs 8, 11, and 14 have outputs 25, 34, and 43. Find the rule. Then find the output for input 20.

_____

_____

ANSWER KEY

Rule Detectives

GRADE 5 · 5.OA.B

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Rule: add 8. Input: 26. Output: ___	**34**
2	Rule: multiply by 3. Input: 12. Output: ___	**36**
3	2 gives 18. 3 gives 27. What does 4 give?	**36**
4	Rule: subtract 11. The output is 29. What is the input?	**40**
5	Pattern A: 10, 14, 18. Pattern B: 13, 17, 21. How much greater is each Pattern B term?	**3**

PART 2 · APPLY IT

1. **Multiply levels by 24; 144 points.** Use 24 points for each of 6 levels. 24 times 6 = 144.
2. **21 jumps** The number of jumps increases by 4 each day. 17 + 4 = 21.

CHALLENGE

Multiply the input by 3, then add 1; 61

Accept equivalent wording for rules, such as “times 3, then plus 1.”