LESSON MAKER PRO

Pattern Trailblazers

Spot the rule, then keep it going.

GRADE 3 · 3.PFA.1.c

3.PFA.1.c "Solve contextual problems that involve identifying, describing, and extending patterns."

NAME _____ DATE _____

FIND THE RULE

A pattern follows a rule. Find how the terms change or repeat, then use that same rule to continue the pattern. Check that your new terms match the rule.

WORKED EXAMPLE

Extend the pattern: 34, 42, 50, 58, ____.

1. The numbers increase by 8 each time.
2. 58 + 8 = 66.
3. The next number is 66.

Answer: 66

PRACTICE 6 problems

1 Complete the pattern and write the rule: 3, 6, 9, 12, ___, ___.

ANSWER _____

2 Complete the pattern and write the rule: 28, 24, 20, 16, ___.

ANSWER _____

3 Complete the pattern: 2, 5, 10, 17, ___. Describe how the pattern changes.

ANSWER _____

4 What is the rule for this pattern? 9, 18, 27, 36.

ANSWER _____

5 A scarf has this color pattern: red, yellow, yellow, red, yellow, yellow, ___, ___, ___. Write the next three colors.

ANSWER _____

6 Complete the pattern and write the rule: 12, 24, 36, 48, ___, ___.

ANSWER _____

APPLY IT Show your work

1 In a video game, Nia earns 3 coins in round 1, 6 coins in round 2, 9 coins in round 3, and 12 coins in round 4. If the pattern continues, how many coins will she earn in round 5?

WORK SPACE

ANSWER _____

2 At a skate park, Maya completes 14 laps on Monday, 18 laps on Tuesday, 22 laps on Wednesday, and 26 laps on Thursday. If the pattern continues, how many laps will she complete on Friday? Describe the rule.

WORK SPACE

ANSWER _____

CHALLENGE One step up

Complete the pattern: 4, 7, 11, 14, 18, 21, ___, ___, ___. Explain the rule.

WORK SPACE AND ANSWER

ANSWER KEY

Pattern Trailblazers

GRADE 3 · 3.PFA.1.c

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Complete the pattern and write the rule: 3, 6, 9, 12, ___, ___.	**15, 18; add 3 each time**
2	Complete the pattern and write the rule: 28, 24, 20, 16, ___.	**12; subtract 4 each time**
3	Complete the pattern: 2, 5, 10, 17, ___. Describe how the pattern changes.	**26; add 3, then 5, then 7, then 9**
4	What is the rule for this pattern? 9, 18, 27, 36.	**Add 9 each time**
5	A scarf has this color pattern: red, yellow, yellow, red, yellow, yellow, ___, ___, ___. Write the next three colors.	**red, yellow, yellow**
6	Complete the pattern and write the rule: 12, 24, 36, 48, ___, ___.	**60, 72; add 12 each time**

PART 2 · APPLY IT

1. **15 coins** The number of coins increases by 3 each round. Add 3 to 12 to get 15.
2. **30 laps; add 4 laps each day** The number of laps increases by 4 each day. Add 4 to 26 to get 30.

CHALLENGE

25, 28, 32. The rule alternates: add 3, then add 4.

Accept equivalent rule wording, such as “increase by” or “go up by.” For the challenge, students should identify the alternating add 3, add 4 rule and give all three correct terms.