LESSON MAKER PRO

Pattern Path

Use rules to grow and shrink number patterns.

GRADE 4 · MA.4.AR.3.2

MA.4.AR.3.2 "Generate, describe and extend a numerical pattern that follows a given rule."

NAME _____ DATE _____

FOLLOW THE RULE

A numerical pattern changes in the same way each time. Read the numbers in order, find what is added or subtracted, and use that rule to continue the pattern.

WORKED EXAMPLE

Start at 6. Add 8 each time. Write the next three numbers: 6, 14, 22, 30, ____, ____, ____

1. Start with 30, the last number shown.
2. Add 8: 30 + 8 = 38.
3. Add 8 again: 38 + 8 = 46.
4. Add 8 once more: 46 + 8 = 54.

Answer: 38, 46, 54

PRACTICE 6 problems

1 Continue the pattern: 1, 4, 7, 10, ___, ___

ANSWER _____

2 Continue the pattern: 49, 44, 39, ___, ___

ANSWER _____

3 Describe the rule: 16, 25, 34, 43, 52

ANSWER _____

4 Continue the pattern: 84, 75, 66, 57, ___

ANSWER _____

5 Start at 12. Add 12 each time. Write the next three numbers: 12, 24, 36, 48, ___, ___, ___

ANSWER _____

6 Continue the pattern: 100, 90, 80, ___, ___

ANSWER _____

APPLY IT Show your work

1 At a game club, Maya starts with 15 tickets. She earns 4 more tickets after each game. Her ticket totals are 15, 19, 23, 27, ___, ___. Write the next two totals.

WORK SPACE

ANSWER _____

2 Jordan has $17 in a savings jar. Each week, Jordan adds $4. The amounts are $17, $21, $25, $29, ___, ___. Write the next two amounts.

WORK SPACE

ANSWER _____

CHALLENGE One step up

The pattern is 2, 7, 17, 32, 52, __, __. Write the next two numbers. Explain how the amounts added change.

WORK SPACE AND ANSWER

ANSWER KEY

Pattern Path

GRADE 4 · MA.4.AR.3.2

PART 1 · PRACTICE

#	PROBLEM	ANSWER
1	Continue the pattern: 1, 4, 7, 10, ___, ___	**13, 16**
2	Continue the pattern: 49, 44, 39, ___, ___	**34, 29**
3	Describe the rule: 16, 25, 34, 43, 52	**Add 9 each time.**
4	Continue the pattern: 84, 75, 66, 57, ___	**48**
5	Start at 12. Add 12 each time. Write the next three numbers: 12, 24, 36, 48, ___, ___, ___	**60, 72, 84**
6	Continue the pattern: 100, 90, 80, ___, ___	**70, 60**

PART 2 · APPLY IT

1. **31, 35** The pattern adds 4 tickets each time. Add 4 to 27, then add 4 again.
2. **$33, $37** The pattern adds $4 each week. Add $4 to $29, then add $4 again.

CHALLENGE

77, 107.

Accept equivalent rule descriptions, such as “increase by 9” for “add 9 each time.” For the challenge, accept an explanation that identifies the added amounts increasing by 5 each step.