



Patterns and Input/Output Tables

Name: _____

Date: _____

Grade: Grade 4

Part A: Fix the Sentence

Each sentence has an error. Rewrite it correctly on the line.

1. Fix the sentence: The pattern 2, 4, 8, 16 follows the rule add 2.

Rewrite: _____

2. Fix the sentence: The next term in 1, 3, 9, 27 is 54.

Rewrite: _____

3. Fix the sentence: In 100, 90, 80, 70 the rule is subtract 5.

Rewrite: _____

Part B: Fill in the Blank

Write the missing word or number on each line.

- The pattern 3, 9, 27, 81 follows the rule multiply by _____.
- The next term after 5, 10, 20, 40 is _____.
- In 64, 56, 48, 40 the rule is subtract _____.
- Continuing 2, 6, 18, _____, the missing term is 54.

Part C: Short Answer

Answer each question in one or two complete sentences.

1. Describe the rule for 4, 8, 16, 32 and give the next two terms in this Grade 4 pattern.

2. Explain the difference between an addition rule and a multiplication rule using Grade 4 examples.

Part A: Fix the Sentence

Each sentence has an error. Rewrite it correctly on the line.

1. Fix the sentence: The pattern 2, 4, 8, 16 follows the rule add 2.

Rewrite: **The pattern 2, 4, 8, 16 follows the rule multiply by 2.**

2. Fix the sentence: The next term in 1, 3, 9, 27 is 54.

Rewrite: **The next term in 1, 3, 9, 27 is 81.**

3. Fix the sentence: In 100, 90, 80, 70 the rule is subtract 5.

Rewrite: **In 100, 90, 80, 70 the rule is subtract 10.**

Part B: Fill in the Blank

Write the missing word or number on each line.

- The pattern 3, 9, 27, 81 follows the rule multiply by 3.
- The next term after 5, 10, 20, 40 is 80.
- In 64, 56, 48, 40 the rule is subtract 8.
- Continuing 2, 6, 18, 54, the missing term is 54.

Part C: Short Answer

Answer each question in one or two complete sentences.

1. Describe the rule for 4, 8, 16, 32 and give the next two terms in this Grade 4 pattern.

The rule is multiply by 2. Each term doubles the previous one, so after 32 comes 64, and after 64 comes 128 because 64 times 2 equals 128.

2. Explain the difference between an addition rule and a multiplication rule using Grade 4 examples.

An addition rule changes by the same amount, like 5, 10, 15, 20 (add 5). A multiplication rule multiplies by the same factor, like 5, 10, 20, 40 (multiply by 2), so the gap grows.
