Name _____

Change the Groups Answer Key

1. Look carefully at the parentheses.

a) (2 + 3) + 4 = 2 + (3 + 4) b) (6 × 5) × 2 = 6 × (5 × 2)

Answer/Explanation: In each equation, the grouping (parentheses) moves, but the numbers stay in the same order. Both sides give the same result because **changing how numbers are grouped does not change their sum or product**.

2. Explain the idea in your own words: The associative property tells us that when we change how numbers are **grouped**, the **answer** stays the same.

3. Fill in the blanks to show the property of addition.

(___ + ***)*** **+** ___ **=** ___ **+** ***(*** + ___)
Example: (4 + 5) + 6 = 4 + (5 + 6)

4. Compute both sides (Addition)

a) (3 + 7) + 2 = 10 + 2 = **12** 3 + (7 + 2) = 3 + 9 = **12**
Are the results the same? **Yes**

b) (8 + 4) + 1 = 12 + 1 = **13** 8 + (4 + 1) = 8 + 5 = **13**
Are the results the same? **Yes**

5. Compute both sides (Multiplication)

a) (2 × 3) × 4 = 6 × 4 = **24** 2 × (3 × 4) = 2 × 12 = **24**
Are the results the same? **Yes**

b) (5 × 2) × 3 = 10 × 3 = **30** 5 × (2 × 3) = 5 × 6 = **30**
Are the results the same? **Yes**

6. Fill in the missing number to make the property true.

(4 + 6) + ___ = 4 + (6 + 3) **Answer:** 3

(3 × 5) × ___ = 3 × (5 × 2) **Answer:** 2