Name _____

Spot It and Fix It Answer Key

1. Compute both sides (Addition)

a) (3 + 4) + 5 = 7 + 5 = 12 3 + (4 + 5) = 3 + 9 = 12

b) (6 + 2) + 7 = 8 + 7 = 15 6 + (2 + 7) = 6 + 9 = 15

c) (9 + 5) + 1 = 14 + 1 = 15 9 + (5 + 1) = 9 + 6 = 15

Pattern you should notice: Both sides always give the same sum. Changing how you group (where the parentheses go) does not change the result in addition. This is the associative property of addition.

2. Compute both sides (Multiplication)

a) (2 × 3) × 4 = 6 × 4 = 24 2 × (3 × 4) = 2 × 12 = 24

b) (5 × 6) × 2 = 30 × 2 = 60 5 × (6 × 2) = 5 × 12 = 60

c) (3 × 4) × 5 = 12 × 5 = 60 3 × (4 × 5) = 3 × 20 = 60

Pattern you should notice: Both sides always give the same product. Changing how you group does not change the product in multiplication. This is the associative property of multiplication.

3. Compare operations

a) (8 + 3) + 2 = 11 + 2 = 13 8 + (3 + 2) = 8 + 5 = 13

b) (8 – 3) – 2 = 5 – 2 = 3 8 – (3 – 2) = 8 – 1 = 7

What can you tell about addition vs. subtraction?
Addition can be regrouped without changing the answer (associative). Subtraction cannot be regrouped without changing the answer (not associative). Grouping subtraction differently gives a different result.

4. Multiplication vs. division

a) (6 × 2) × 4 = 12 × 4 = 48 6 × (2 × 4) = 6 × 8 = 48
These are equal.

b) (6 ÷ 2) ÷ 4 = 3 ÷ 4 = 3/4 = 0.75 6 ÷ (2 ÷ 4) = 6 ÷ (1/2) = 6 ÷ 0.5 = 12
These are not equal.

What can you tell about multiplication vs. division?
Multiplication can be regrouped without changing the answer (associative). Division cannot be regrouped without changing the answer (not associative).