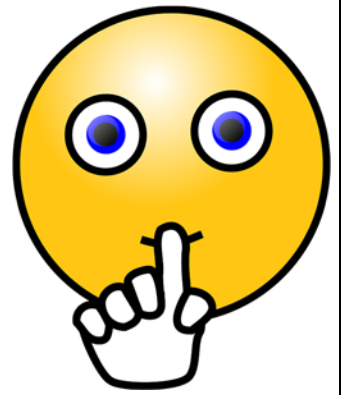# Explain the Grouping

1. Compute both sides (Addition)

a) $(4 + 5) + 3 =$ _____ $4 + (5 + 3) =$ _____

b) $(7 + 2) + 8 =$ _____ $7 + (2 + 8) =$ _____

c) $(6 + 9) + 5 =$ _____ $6 + (9 + 5) =$ _____

What do you notice about all three?

_____

_____

2. Compute both sides (Multiplication)

a) $(3 × 2) × 5 =$ _____ $3 × (2 × 5) =$ _____

b) $(4 × 5) × 6 =$ _____ $4 × (5 × 6) =$ _____

c) $(2 × 3) × 9 =$ _____ $2 × (3 × 9) =$ _____

What pattern do you see?

_____

_____

3. Fill in the missing number to make each equation true.

a) $(5 + 6) +$ ___ $= 5 + (6 + 3)$ Answer: _____

b) $(3 × 4) ×$ ___ $= 3 × (4 × 8)$ Answer: _____

c) $(9 + 2) + 4 = 9 + ($ ___ $+ 4)$ Answer: _____

4. Add parentheses to make each equation show the associative property.

a) $2 + 7 + 3 =$ _____

b) $5 × 2 × 6 =$ _____

c) $10 + 8 + 2 =$ _____

d) $3 × 9 × 4 =$ _____