

Name _____

Regroup to Make Sense Answer Key

1. Apples in Baskets -

Way 1: $(3 \times 5) \times 4 = 15 \times 4 = 60$

Way 2: $3 \times (5 \times 4) = 3 \times 20 = 60$

Answer: Both equal 60 apples.

Which is easier? $3 \times (5 \times 4)$, because $5 \times 4 = 20$ is easier to multiply by 3 mentally.

2. Boxes of Markers - Each box has 10 packs, each pack has 6 markers.

Equation 1: $(10 \times 6) \times 1 = 60 \times 1 = 60$ Equation 2: $10 \times (6 \times 1) = 10 \times 6 = 60$

Both equal: 60 markers.

3. Lunch Orders - 4 trays \times 3 boxes per tray \times 5 sandwiches per box

a) $(4 \times 3) \times 5 = 12 \times 5 = 60$

b) $4 \times (3 \times 5) = 4 \times 15 = 60$

Explanation: Both ways equal 60 sandwiches because of the associative property-changing how numbers are grouped doesn't change the total.

4. Choose an easier way to group and solve

a) $25 + 75 + 100 =$ $(25 + 75) + 100 = 100 + 100 = 200$

Easier grouping: $(25 + 75) + 100$, because $25 + 75 = 100$ is a round number.

b) $4 \times 5 \times 25 =$ $4 \times (5 \times 25) = 4 \times 125 = 500$

Easier grouping: $4 \times (5 \times 25)$, because $5 \times 25 = 125$ is simple.

5. Group to simplify

a) $50 + 25 + 75$ $(25 + 75) + 50 = 100 + 50 = 150$

b) $2 \times 8 \times 50$ $(2 \times 50) \times 8 = 100 \times 8 = 800$

6. Fill in the missing number

$(7 + 9) + 2 = 7 + (9 + 2)$

$(3 \times 4) \times 5 = 3 \times (4 \times 5)$