

ANSWERS Break it Up: Distributive Property 3

The **distributive property** is a tool to make multiplication with larger numbers easier.

To use the distributive property:
Break one factor into two addends,
multiply both addends by the other
factor, and add together both products.

Break up
the bigger
number
into two
addends

$$\begin{aligned}
 &16 \times 5 \\
 &\rightarrow (10 + 6) \times 5 \\
 &(10 \times 5) + (6 \times 5) \\
 &50 + 30 = 80
 \end{aligned}$$

$$16 \times 5 = 80$$



Directions: Solve each problem below using the distributive property. Show your work.

1. 15×9

$$\begin{aligned}
 &(8 + 7) \times 9 \\
 &(8 \times 9) + (7 \times 9) \\
 &72 + 63 \\
 &15 \times 9 = 135
 \end{aligned}$$

2. 5×14

$$\begin{aligned}
 &5 \times (10 + 4) \\
 &(5 \times 10) + (5 \times 4) \\
 &50 + 20 \\
 &5 \times 14 = 70
 \end{aligned}$$

3. 12×8

$$\begin{aligned}
 &(8 + 4) \times 8 \\
 &(8 \times 8) + (4 \times 8) \\
 &64 + 32 \\
 &12 \times 8 = 96
 \end{aligned}$$

4. 14×10

$$\begin{aligned}
 &(8 + 6) \times 10 \\
 &(8 \times 10) + (6 \times 10) \\
 &80 + 60 \\
 &14 \times 10 = 140
 \end{aligned}$$

5. 18×7

$$\begin{aligned}
 &(9 + 9) \times 7 \\
 &(9 \times 7) + (9 \times 7) \\
 &63 + 63 \\
 &18 \times 7 = 126
 \end{aligned}$$

6. 4×13

$$\begin{aligned}
 &4 \times (6 + 7) \\
 &(4 \times 6) + (4 \times 7) \\
 &24 + 28 \\
 &4 \times 13 = 52
 \end{aligned}$$

7. 8×19

$$\begin{aligned}
 &8 \times (10 + 9) \\
 &(8 \times 10) + (8 \times 9) \\
 &80 + 72 \\
 &8 \times 19 = 152
 \end{aligned}$$

8. 16×3

$$\begin{aligned}
 &(7 + 9) \times 3 \\
 &(7 \times 3) + (9 \times 3) \\
 &21 + 27 \\
 &16 \times 3 = 48
 \end{aligned}$$

9. 4×15

$$\begin{aligned}
 &4 \times (10 + 5) \\
 &(4 \times 10) + (4 \times 5) \\
 &40 + 20 \\
 &4 \times 15 = 60
 \end{aligned}$$