

ANSWERS Break it Up: Distributive Property 2

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

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

$$16 \times 5 = 80$$



Directions: Solve each problem below using the distributive property.
Show your work. Then answer the question that follows.

1. 5×13

$$\begin{aligned}
 &5 \times (3 + 10) \\
 &(5 \times 3) + (5 \times 10) \\
 &15 + 50 \\
 &5 \times 13 = 65
 \end{aligned}$$

2. 3×16

$$\begin{aligned}
 &3 \times (8 + 8) \\
 &(3 \times 8) + (3 \times 8) \\
 &24 + 24 \\
 &3 \times 16 = 48
 \end{aligned}$$

3. 18×4

$$\begin{aligned}
 &(10 + 8) \times 4 \\
 &(10 \times 4) + (8 \times 4) \\
 &40 + 32 \\
 &18 \times 4 = 72
 \end{aligned}$$

4. 19×6

$$\begin{aligned}
 &(10 + 9) \times 6 \\
 &(10 \times 6) + (9 \times 6) \\
 &60 + 54 \\
 &19 \times 6 = 114
 \end{aligned}$$

5. 12×7

$$\begin{aligned}
 &(5 + 7) \times 7 \\
 &(5 \times 7) + (7 \times 7) \\
 &35 + 49 \\
 &12 \times 7 = 84
 \end{aligned}$$

6. 8×14

$$\begin{aligned}
 &8 \times (6 + 8) \\
 &(8 \times 6) + (8 \times 8) \\
 &48 + 64 \\
 &8 \times 14 = 112
 \end{aligned}$$

How does the distributive property help you solve multiplication problems? (Answers will vary)

The distributive property helps to solve multiplication problems because it shows how numbers can be broken down to make easier problems. Breaking the problem down into easier problems and then adding the answers back together gets me to the same answer as going through the process of long multiplication. It is a method that makes multiplication simpler.