

DISTRIBUTIVE PROPERTY

What Is the Distributive Property?

- The distributive property offers a choice in multiplication of two ways to treat the addends in the equation. We are multiplying a sum by a factor which results in the same product as multiplying each addend by the factor and then adding the products.

$$4 \times (5 + 6) = 4 \times 11 = 44$$

$$4 \times (5 + 6) = 20 + 24 = 44$$

- When applying the distributive property, you can add the numbers inside the parentheses first and then multiply, for instance:



- When a number product each of the then add the

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$$8 \times (2 + 7) = 16 + 56 = 72$$

- Whichever method you choose to apply the distributive property, the result (answer) will be the same. Distributing the multiplication factor over each addend or over the sum of the addends is your choice. Sometimes the two numbers to be added are easy to solve: $15 + 25$ or $17 + 20$. This is when it is more efficient to add first. When the factor belongs to a familiar set, multiply first. This would be true if the factor was 2, 3, 4, 5, 10, 20, 100, etc.

Examples: Here are a variety of examples in which the distributive law has been applied correctly:

$$7 \times (6 + 7) = 42 + 49 = 91$$

$$10 \times (3 + 17) = 30 + 170 = 200$$

$$8 \times (6 + 5) = 8 \times 11 = 88$$

$$12 \times (2 + 7) = 12 \times 9 = 108$$

Note: *The distributive law can not be applied to subtraction or division.*

Try This!

- Apply the distributive property and solve: $6 \times (13 + 18) =$

- Apply the distributive property and solve: $12 \times (15 + 80) =$



PREVIEW

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- Apply the distributive property and solve: $15 \times (3 + 68) =$

- Apply the distributive property and solve: $60 \times (17 + 27) =$

- Apply the distributive property and solve: $16 \times (60 + 80) =$