

## Understanding Distributive Property

1. Using the distributive property, find the value of each of the expressions.

$$8 \times (n + 3) \quad \text{if } n = 5$$

$$= (8 \times \underline{\hspace{1cm}}) + (8 \times 3)$$

$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$

$$0.5 \times (50 + n) \quad \text{if } n = 10$$

$$= (0.5 \times 50) + (0.5 \times \underline{\hspace{1cm}})$$

$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$

$$5 \times (10 + n) \quad \text{if } n = 5$$

$$= (5 \times 10) + (5 \times \underline{\hspace{1cm}})$$

$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$

$$0.5 \times (70 + n) \quad \text{if } n = 15$$

$$= (0.5 \times 70) + (0.5 \times \underline{\hspace{1cm}})$$

$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$

$$3 \times (n + 5) \quad \text{if } n = 0.4$$

$$= (3 \times \underline{\hspace{1cm}}) + (3 \times 5)$$

$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$

$$0.2 \times (10 + n) \quad \text{if } n = 3$$

$$= (0.2 \times 10) + (0.2 \times \underline{\hspace{1cm}})$$

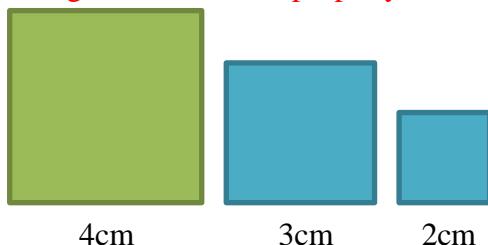
$$= \underline{\hspace{1cm}} + \underline{\hspace{1cm}}$$

$$= \underline{\hspace{1cm}}$$

2. Check if the equation  $5 \times (n + 13) = 105$  is true where  $n = 8$  by using distributive property.

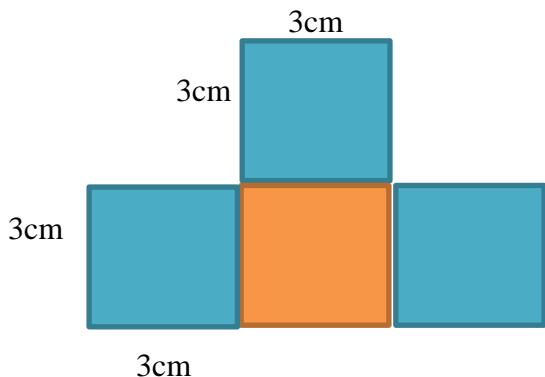
Solution:

3. Using the distributive property, find the sum of the perimeter of the squares below.



Solution:

4. Using the distributive property, find the total area of the figure below.



Solution:

5. True or False

$$\frac{1}{2}(x - y) - 4 = \frac{1}{2}x - \frac{1}{2}y - 4$$

## Understanding Distributive Property

Answer Key

1. Using the distributive property, find the value of each of the expressions.

$$\begin{aligned}8 \times (n + 3) &\quad \text{if } n = 5 \\&= (8 \times 5) + (8 \times 3) \\&= 40 + 24 \\&= 64\end{aligned}$$

$$\begin{aligned}0.5 \times (50 + n) &\quad \text{if } n = 10 \\&= (0.5 \times 50) + (0.5 \times 10) \\&= 25 + 5 \\&= 30\end{aligned}$$

$$\begin{aligned}5 \times (10 + n) &\quad \text{if } n = 5 \\&= (5 \times 10) + (5 \times 5) \\&= 50 + 25 \\&= 75\end{aligned}$$

$$\begin{aligned}0.5 \times (70 + n) &\quad \text{if } n = 15 \\&= (0.5 \times 70) + (0.5 \times 15) \\&= 35 + 7.5 \\&= 42.5\end{aligned}$$

$$\begin{aligned}3 \times (n + 5) &\quad \text{if } n = 0.4 \\&= (3 \times 0.4) + (3 \times 5) \\&= 1.2 + 15 \\&= 16.2\end{aligned}$$

$$\begin{aligned}0.2 \times (10 + n) &\quad \text{if } n = 3 \\&= (0.2 \times 10) + (0.2 \times 3) \\&= 2 + 0.6 \\&= 2.6\end{aligned}$$

2. The equation is true.  
3. Total Perimeter = P1 + P2 + P3 = 4 x (4 + 3 + 2) = 36 cm  
4. 36 sq. cm  
5. True