

Solve for y.

$$\begin{array}{r} 2y + 4 = 12 \\ -4 \quad -4 \\ \hline 2y = 8 \\ \frac{2y}{2} = \frac{8}{2} \\ \boxed{y = 4} \end{array}$$

Solve for y

$$\begin{array}{r} 2y + 4x = 12 \\ -4x \quad -4x \\ \hline 2y = 12 - 4x \\ \frac{2y}{2} = \frac{12 - 4x}{2} \\ \boxed{y = 6 - 2x} \end{array}$$

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Solving in terms of a Variable 9/16

\* These equations will have more than 1 variable ex)  $2xy = 3v + 4$

\* Your answer is NOT going to be a number, but instead contain a variable(s).

Solve for V :

$$\begin{array}{r} 2xy = 3v + 4 \\ -4 \quad -4 \\ \hline 2xy - 4 = 3v \\ \frac{2xy - 4}{3} = \frac{3v}{3} \\ \frac{2}{3}xy - \frac{4}{3} = v \quad \text{or} \quad \boxed{\frac{2xy - 4}{3} = v} \end{array}$$

\* Get v alone

Remember  
**ALWAYS**  
 Add/Subtract **FIRST**  
 Multiply/Divide **Second**

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## Practice

① Solve for m:  
in terms of n

$$4m - 3n = 8$$

$$\begin{array}{r} +3n \quad +3n \\ \hline \end{array}$$

$$\frac{4m}{4} = \frac{8+3n}{4}$$

$$m = 2 + \frac{3}{4}n$$

$$m = 2 + 0.75n$$

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② Solve for n

$$15 = 3n + 6p$$

$$\begin{array}{r} -6p \quad -6p \\ \hline 15 - 6p = \frac{3n}{3} \end{array}$$

$$n = 5 - 2p$$

↑  
P  
E  
M  
D  
A  
S

③  $3 \cdot V = \left( \frac{1}{3} \pi r^2 h \right)$

Solve for r

$$\frac{3V}{\pi h} = \frac{\pi r^2 h}{\pi h}$$

$$\sqrt{\frac{3V}{\pi h}} \sqrt{r^2}$$

$$r = \sqrt{\frac{3V}{\pi h}}$$

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$$\textcircled{3} \cdot A = \frac{1}{2}(b_1 + b_2)h$$

Solve for  $b_1$

$$\frac{2A}{h} = \frac{(b_1 + b_2)h}{h}$$

$$\frac{2A}{h} = b_1 + b_2$$

$$\frac{2A}{h} - b_2 = b_1$$

$$\boxed{\frac{2A}{h} - b_2 = b_1}$$

$$\textcircled{4} V = \pi r^3 h$$

Solve for  $r$

$$\frac{V}{\pi h} = \frac{\pi r^3 h}{\pi h}$$

$$\sqrt[3]{\frac{V}{\pi h}} = \sqrt[3]{r^3}$$

$$\boxed{\sqrt[3]{\frac{V}{\pi h}} = r}$$

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