

Literal Equations and Formulas

Solve each equation for y . Then find the value of each Value of x .

1) $10x + 5y = 80$; $x = 3, 5$

$$\begin{array}{r} 10x + 5y = 80 \\ -10x \quad -10x \\ \hline 5y = 80 - 10x \\ 5 \quad 5 \end{array}$$

$$y = 16 - 2x$$

$$y = 16 - 2x$$

$$y = 16 - 2(3)$$

$$y = 16 - 6$$

$$y = 10$$

$$y = 16 - 2x$$

$$y = 16 - 2(5)$$

$$y = 16 - 10$$

$$y = 6$$

What equation do you get when you solve $ax - bx = c$ for x ?

2) $ax - bx = c$

$$\begin{array}{r} x(a - b) = c \\ a - b \quad a - b \end{array}$$

$$x = \frac{c}{a - b}$$

Rewrite each formula.

3) $V = \frac{1}{3} \pi r^2 h$ for h

$$3 \cdot V = 3 \cdot \frac{1}{3} \pi r^2 h$$

$$\begin{array}{r} 3V = \pi r^2 h \\ \pi r^2 \quad \pi r^2 \end{array}$$

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

4) $2(x + a) = 4b$ for a

$$2x + 2a = 4b$$

$$\begin{array}{r} -2x \quad -2x \\ \hline \end{array}$$

$$\frac{2a}{2} = \frac{4b - 2x}{2}$$

$$a = 2b - x$$