

Name: _____

Date: _____

Solving Literal Equations Homework

Solve the following equations for the specified variable.

1) $\frac{7t}{7} = \frac{x}{7}$, for t

$$t = \frac{x}{7}$$

3) $\frac{7a}{-7a} - \frac{b}{-7a} = \frac{15a}{-7a}$, for a

$$\frac{-b}{8} = \frac{8a}{8}$$

$$\frac{-b}{8} = a$$

5) $\frac{7f}{7} + \frac{g}{-7} = \frac{5}{7}$, for f

$$\frac{7f}{7} = \frac{-g+5}{7}$$

$$f = \frac{-g+5}{7}$$

7) $\frac{kn}{-4k} + \frac{4f}{-4k} = \frac{9v}{-4k}$, for n

$$\frac{kn}{k} = \frac{9v-4f}{k}$$

$$n = \frac{9v-4f}{k}$$

9) $\frac{bc}{-3b} + \frac{3g}{-3b} = \frac{2k}{-3b}$, for c

$$\frac{bc}{b} = \frac{-3g+2k}{b}$$

$$c = \frac{-3g+2k}{b}$$

2) $\frac{q-r}{+r+r} = r$, for r

$$\frac{q}{2} = \frac{2r}{2}$$

$$\frac{q}{2} = r$$

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

$$\frac{-2y}{-2} = \frac{-x+1}{-2}$$

$$y = \frac{-x+1}{-2}$$

or
$$y = \frac{x-1}{2}$$

6) $\frac{rt}{-rt} - \frac{2n}{-rt} = \frac{y}{-rt}$, for n

$$\frac{-2n}{-2} = \frac{y-rt}{-2}$$

$$n = \frac{y-rt}{-2}$$

or
$$n = \frac{rt-y}{2}$$

8) $\frac{8c}{-8c} - \frac{6j}{-8c} = \frac{5p}{-8c}$, or j

$$\frac{-6j}{-6} = \frac{-8c-5p}{-6}$$

$$j = \frac{-8c-5p}{-6}$$

or
$$j = \frac{8c+5p}{6}$$

10) $\frac{e}{w} = \frac{wp}{w}$, for p

$$\frac{e}{w} = p$$

11) $4m - n = m$, for m

$$\begin{array}{r} -4m \quad -4m \\ -n = -3m \\ \hline -3 \quad -3 \end{array}$$

$$m = \frac{n}{3}$$

13) $m + 3n = 1$, for n

$$\begin{array}{r} 3n = -m + 1 \\ \hline 3 \quad 3 \end{array}$$

$$n = \frac{-m + 1}{3}$$

15) $\frac{p+9}{5} = q$, for p

$$\begin{array}{r} p+9 = 5q \\ -9 \quad -9 \end{array}$$

$$p = 5q - 9$$

17) $\frac{x-c}{2} = d$, for c

$$\begin{array}{r} x-c = 2d \\ -x \quad -x \end{array}$$

$$\begin{array}{r} -c = 2d - x \\ \hline -1 \quad -1 \end{array}$$

$$c = -2d + x$$

12) $-5c + d = 2c$, for c

$$\begin{array}{r} +5c \quad +5c \\ d = 7c \\ \hline 7 \quad 7 \end{array}$$

$$c = \frac{d}{7}$$

14) $ax - c = b$, for x

$$\begin{array}{r} ax = b + c \\ \hline a \quad a \end{array}$$

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

16) $\frac{x-c}{2} = d$, for x

$$\begin{array}{r} x-c = 2d \\ +c \quad +c \end{array}$$

$$x = 2d + c$$

18) $s(3x - 5y) = 9d$, for s

$$\begin{array}{r} 3x-5y \quad 3x-5y \\ 9d \\ \hline 3x-5y \quad 3x-5y \end{array}$$

$$s = \frac{9d}{3x-5y}$$