

Solve each equation for the unknown value.

$$\begin{array}{r}
 1) \quad 3x + 2 = 8 \\
 \underline{-2 \quad -2} \\
 3x = 6 \\
 \underline{\quad \quad \quad} \\
 x = 2
 \end{array}$$

$$\begin{array}{r}
 2) \quad -2(x - 4) = 10 \\
 \underline{-2x + 8 = 10} \\
 \underline{-8 \quad -8} \\
 -2x = 2 \\
 \underline{-2 \quad -2} \\
 x = -1
 \end{array}$$

$$\begin{array}{r}
 3) \quad \frac{2}{3}x - \frac{1}{4} = \frac{5}{4} \\
 \underline{\quad \quad \quad} \\
 \frac{2}{3}x = \frac{6}{4} \\
 \underline{\quad \quad \quad} \\
 x = \frac{9}{4}
 \end{array}$$

$$\begin{array}{r}
 4) \quad \frac{x}{4} + 2 = 7 \\
 \underline{-2 \quad -2} \\
 \frac{x}{4} = 5 \\
 \underline{\quad \quad \quad} \\
 x = 20
 \end{array}$$

$$\begin{array}{r}
 5) \quad \frac{x-1}{5} = 3.5 \\
 \underline{\quad \quad \quad} \\
 x-1 = 17.5 \\
 \underline{\quad \quad \quad} \\
 x = 18.5
 \end{array}$$

$$\begin{array}{r}
 6) \quad \frac{d+4}{2} = -5.2 \\
 \underline{\quad \quad \quad} \\
 d+4 = -10.4 \\
 \underline{-4 \quad -4} \\
 d = -14.4
 \end{array}$$

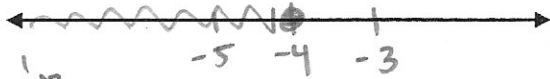
$$\begin{array}{r}
 7) \quad -3(2x + 5) = 9 \\
 \underline{-6x - 15 = 9} \\
 \underline{\quad \quad \quad} \\
 -6x = 24 \\
 \underline{-6 \quad -6} \\
 x = -4
 \end{array}$$

$$\begin{array}{r}
 8) \quad 5(-3x + 12) = 15 \\
 \underline{-15x + 60 = 15} \\
 \underline{-60 \quad -60} \\
 -15x = -45 \\
 \underline{-15 \quad -15} \\
 x = 3
 \end{array}$$

Solve and graph each inequality.

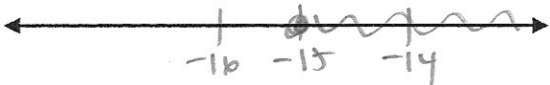
$$9) -2x + 7 \geq 15$$

$$\begin{array}{r} -7 \quad | \quad -7 \\ -2x \geq 8 \\ \hline -2 \quad | \quad -2 \\ x \leq -4 \end{array}$$



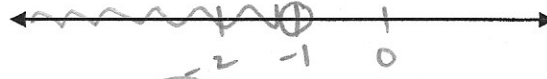
$$11) -\frac{2}{3}r \leq 10 \cdot 3$$

$$\begin{array}{r} -2r \leq 30 \\ \hline -2 \quad | \quad -2 \\ r \geq -15 \end{array}$$



$$10) \frac{x+9}{2} < 4 \cdot 2$$

$$\begin{array}{r} x+9 < 8 \\ -9 \quad | \quad -9 \\ \hline x < -1 \end{array}$$



$$12) -4(2x - 3) > 20$$

$$\begin{array}{r} -8x + 12 > 20 \\ -12 \quad | \quad -12 \\ \hline -8x > 8 \\ \hline -8 \quad | \quad -8 \\ x < -1 \end{array}$$



For each situation, write the equation and solve it.

13) Your mom will pay you 2 dollars for every chore you do around the house. How many chores do you have to do to earn \$26 dollars?

Equation:

$$\begin{array}{r} 2x = 26 \\ \div 2 \quad | \quad \div 2 \\ x = 13 \end{array}$$

x = 13 Chores

14) You are able to earn \$5 for every lawn you mow. You already have \$20. How many lawns will you have to mow to have \$80?

Equation:

$$\begin{array}{r} 5x + 20 = 80 \\ -20 \quad | \quad -20 \\ \hline 5x = 60 \\ \div 5 \quad | \quad \div 5 \\ x = 12 \end{array}$$

x = 12 lawns