

Intermediate Algebra  
Review C: Semester 1 Final Exam

Name: Key-Karturn Hour: \_\_\_\_\_

Solve the following equations.

1.  $2(x-1) = x+7$

$$\begin{array}{r} 2x - 2 = x + 7 \\ -x \quad -x \\ \hline x - 2 = 7 \\ +2 \quad +2 \end{array}$$

$x = 9$

2.  $\frac{-5}{2}m = -45$

$$\left(\frac{2}{-5}\right) \left(\frac{-5}{2}\right) m = -45 \left(\frac{2}{-5}\right)$$

$m = 9.2$

$m = 18$

3.  $\frac{4}{7} = \frac{12}{x}$

$$\frac{4x}{4} = \frac{84}{4}$$

$x = 21$

4.  $6x-3=x-15$

$$\begin{array}{r} -x \quad -x \\ 5x - 3 = -15 \\ +3 \quad +3 \end{array}$$

$$\frac{5x}{5} = \frac{-12}{5}$$

$x = \frac{-12}{5}$

5.  $x+(+29)=-13$

$$\begin{array}{r} x + 29 = -13 \\ -29 \quad -29 \end{array}$$

$x = -42$

6.  $5x-2y=35$  Solve for x.

$$\begin{array}{r} -5x \quad -5x \end{array}$$

$$\frac{-2y}{-2} = \frac{35-5x}{-2}$$

$$y = \frac{35}{-2} - \frac{5x}{-2}$$

$$y = \frac{5}{2}x - 17.5$$

Solve the following inequalities and graph on a number line.

7.  $\frac{3x}{3} \leq \frac{-12}{3}$

$x \leq -4$



8.  $\frac{-5x}{-5} \leq \frac{14+1}{-5}$

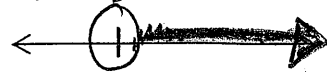
$x \geq -3$



9.  $4m-7 < 9m+8$

$$\begin{array}{r} -4m-8 \quad -4m \quad -8 \end{array}$$

$$\frac{-15}{5} < \frac{5m}{5}$$

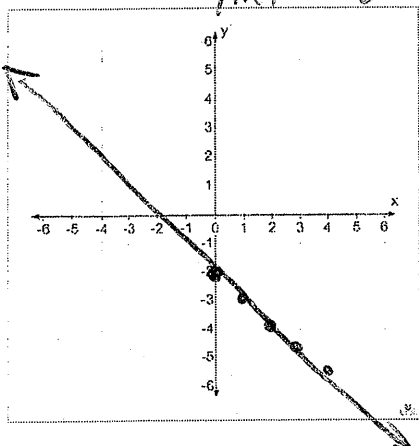


$m > -3$

Graph each equation.

16.  $y = -x - 2$   $m = -\frac{1}{1}$

$y\text{-int} = -2$



17.  $y = \frac{2}{3}x - 4$   $m = \frac{2}{3}$

$y\text{-int} = -4$

