

Equations and Inequalities

Solve each equation.

1) $x - 4 = -20$

- A) $\{-24\}$ B) $\{-5\}$
 C) $\{-16\}$ D) $\{-80\}$

2) $-\frac{3}{2}p = -\frac{3}{4}$

- A) $\left\{-\frac{9}{4}\right\}$ B) $\left\{\frac{3}{4}\right\}$
 C) $\left\{\frac{1}{2}\right\}$ D) $\left\{\frac{9}{8}\right\}$

3) $\frac{m}{10} = 0.26$

- A) $\{2.6\}$ B) $\{10.26\}$
 C) $\{0.026\}$ D) $\{-9.74\}$

4) $-7x + 2 = -117$

- A) $\{17\}$ B) $\{-4\}$
 C) $\{-7\}$ D) $\{-16\}$

5) $-\frac{49}{6} = 2\frac{2}{3}x - 3\frac{1}{2}$

- A) $\{6\}$ B) $\left\{-\frac{7}{4}\right\}$
 C) $\left\{-\frac{2}{3}\right\}$ D) $\{-2\}$

6) $4.4 = \frac{m}{2} + 2$

- A) $\{4.8\}$ B) $\{3.597\}$
 C) $\{2.1\}$ D) $\{-4.3\}$

7) $6(3r - 7) - 5(r - 6) = -38$

- A) $\{-2\}$
 B) $\{\text{All real numbers.}\}$
 C) $\{4\}$
 D) $\{2\}$

8) $k - 2k = 0$

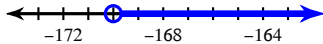
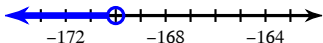
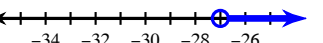
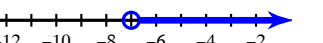
- A) $\left\{\frac{3}{2}\right\}$
 B) $\{\text{All real numbers.}\}$
 C) $\{0\}$
 D) $\left\{-1\frac{1}{2}\right\}$

9) Julio left the hardware store at the same time as Darryl. They drove in opposite directions. Darryl drove at a speed of 41 km/h. After two hours they were 160 km apart. How fast did Julio drive?

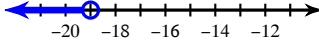

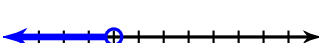
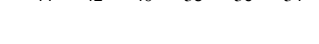
- A) 39 km/h B) 55 km/h
C) 20 km/h D) 10 km/h

Solve each inequality and graph its solution.

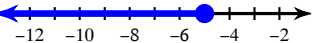
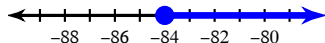
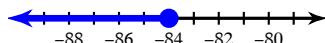
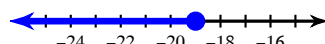
10) $\frac{p}{10} < -17$

- A) $p > -170$: 
- B) $p < -170$: 
- C) $p > -27$: 
- D) $p > -7$: 

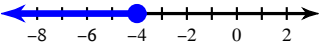
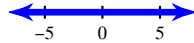
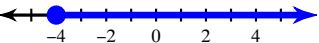
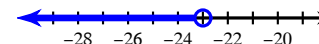
11) $x + (-11) < -30$

- A) $x < -19$: 
- B) $x < \frac{30}{11}$: 
- C) $x < -41$: 
- D) $x < \frac{30}{11}$: 

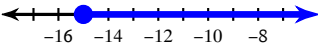
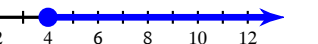
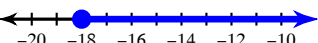
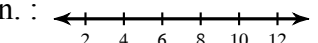
12) $7 \geq k - (-12)$

- A) $k \leq -5$: 
- B) $k \geq -84$: 
- C) $k \leq -84$: 
- D) $k \leq -19$: 

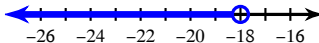
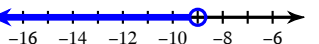
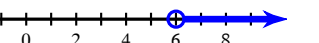
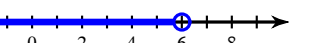
13) $7(1 + 7r) + 4r \leq -205$

- A) $r \leq -4$: 
- B) { All real numbers. } : 
- C) $r \geq -4$: 
- D) $r \geq -23$: 

14) $4(5m + 6) + 3 \geq 107$

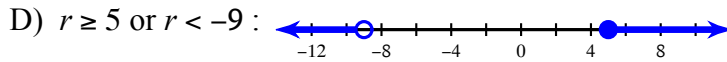
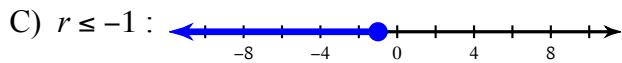
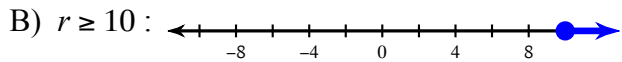
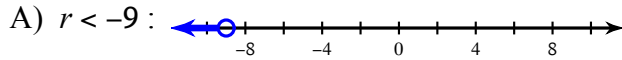
- A) $m \geq -15$: 
- B) $m \geq 4$: 
- C) $m \geq -18$: 
- D) No solution. : 

15) $5 + 4(4n + 6) > 125$

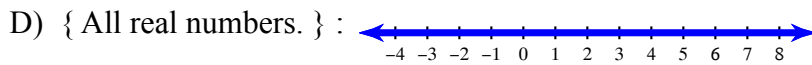
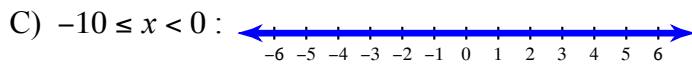
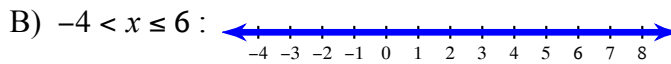
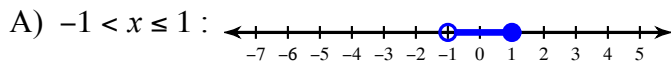
- A) $n < -18$: 
- B) $n < -9$: 
- C) $n > 6$: 
- D) $n < 6$: 

Solve each compound inequality and graph its solution.

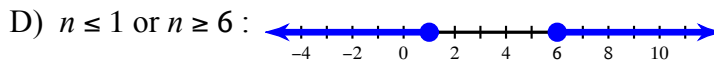
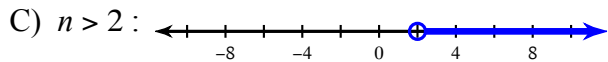
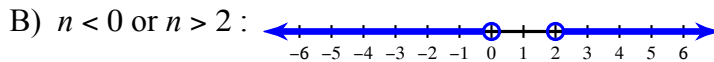
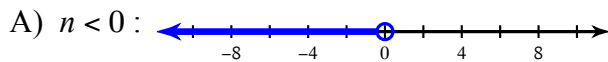
16) $4r \geq 20$ or $r - 9 < -18$



17) $-8 \leq -8x < 8$

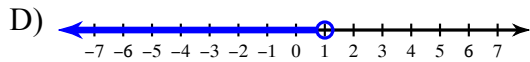
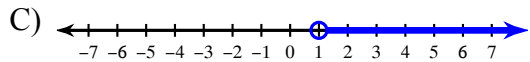
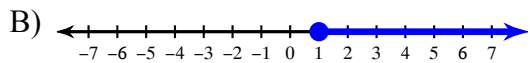
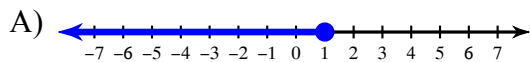


18) $n - 2 \leq -1$ or $-2n \leq -12$



Draw a graph for each inequality.

19) $x \leq 1$



20) $x \geq 1$

