


Practice with Inequalities Solutions

① 

② 

③ 

④ 

⑤
$$\frac{3x}{3} > \frac{21}{3}$$

$$x > 7$$

⑥
$$\frac{2x}{2} \leq \frac{40}{2}$$

$$x \leq 20$$





* Use 0 when you can, it is easy.

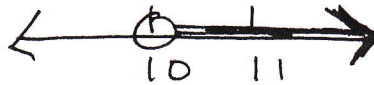
✓ $3(8) > 21$
 $24 > 21$ ✓

✓ $2(0) \leq 40$
 $0 \leq 40$ ✓

⑦
$$\begin{array}{r} 3x + 9 \leq 24 \\ -9 \quad -9 \\ \hline 3x \leq 15 \\ \frac{3x}{3} \leq \frac{15}{3} \\ x \leq 5 \end{array}$$

⑧
$$\begin{array}{r} 2x - 8 > 12 \\ +8 \quad +8 \\ \hline 2x > 20 \\ \frac{2x}{2} > \frac{20}{2} \\ x > 10 \end{array}$$





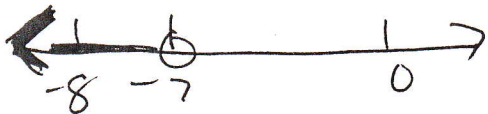
✓ $3(0) + 9 \leq 24$
 $0 + 9 \leq 24$
 $9 \leq 24$ ✓

$2(11) - 8 > 12$
 $22 - 8 > 12$
 $14 > 12$ ✓

$$\textcircled{9} \quad \begin{array}{r} -2 > n+5 \\ -5 \quad -5 \\ \hline \end{array}$$

$$-7 > n$$

$n < -7$ (easier to graph)



$$-2 > -8 + 5$$

$$-2 > -3 \checkmark$$

$$\textcircled{10} \quad \begin{array}{r} \frac{x}{5} + 9 \leq 14 \\ -9 \quad -9 \\ \hline \end{array}$$

$$(5) \frac{x}{5} \leq 5(5)$$

$$x \leq 25$$



$$\frac{0}{5} + 9 \leq 14$$

$$0 + 9 \leq 14$$

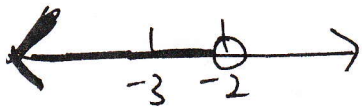
$$9 \leq 14 \checkmark$$

$$\textcircled{11} \quad \begin{array}{r} -3x - 4 > 2 \\ +4 \quad +4 \\ \hline \end{array}$$

$$\frac{-3x}{-3} > \frac{6}{-3}$$

$$x < -2$$

* remember,
flip signs
when \times / \div
by negative.



$$-3(-3) - 4 > 2$$

$$9 - 4 > 2$$

$$5 > 2 \checkmark$$

$$\textcircled{12} \quad \begin{array}{r} 6m - 32 > 40 \\ +32 \quad +32 \\ \hline \end{array}$$

$$\frac{6m}{6} > \frac{72}{6}$$

$$m > 12$$



$$6(13) - 32 > 40$$

$$78 - 32 > 40$$

$$46 > 40 \checkmark$$

$$\textcircled{13} \quad \begin{array}{r} 3 - x < 2 \\ -3 \qquad -3 \end{array}$$

$$\frac{-x < -1}{-1 \quad -1}$$

$$x > 1$$



$$3 - 2 < 2$$

$$1 < 2 \checkmark$$

$$\textcircled{14} \quad \begin{array}{r} -8 < 3x - 17 \\ +17 \qquad +17 \end{array}$$

$$\frac{9 < 3x}{3 \quad 3}$$

$$3 < x \text{ Flip}$$

$$x > 3$$



$$-8 < 3(4) - 17$$

$$-8 < 12 - 17$$

$$-8 < -5 \checkmark$$

$$\textcircled{15} \quad \begin{array}{r} 6 - 2x \geq 12 \\ -6 \qquad -6 \end{array}$$

$$\frac{-2x \geq 6}{-2 \quad -2}$$

$$x \leq -3$$



$$6 - 2(-4) \geq 12$$

$$6 + 8 \geq 12$$

$$14 \geq 12 \checkmark$$

Matching:

1) D

2) E

3) B

4) F

5) C

6) A