

1-8-18

Aim: SWBAT review.

HW: Test Tomorrow

Do Now: Correct hw

Pg. 305 # 21, 23-25; Pg. 320 # 22-25

Clear and solve.

(21)  $\overset{1000}{(-4.42x + 0.9)} = \overset{1000}{(-9.070 - 0.432x)}$   
 $-4420x + 900 = -9070 - 432x$

← The neediest decimal number needs its decimal to move 3 places to the right.  
 →  $\times 1000$

LCD of 5, 9, and 15 is 45

(23)  $\overset{45}{(6\frac{4}{5}n - \frac{8}{9})} = \overset{45}{(7\frac{7}{15}n)}$   
 $306n - 40 = 21n$

LCD of 8 and 20 is 40

(24)  $\overset{40}{(\frac{3}{8} + \frac{9}{20}m)} = \overset{40}{(\frac{23}{20} + \frac{7}{8}m)}$   
 $15 + 18m = 46 + 35m$

(25)  $5\frac{3}{10} - 0.2x = \frac{1}{5}x + 0.8$  OR  $5\frac{3}{10} - 0.2x = \frac{1}{5}x + 0.8$

$\overset{10}{(\frac{53}{10} - \frac{2}{10}x)} = \overset{10}{(\frac{1}{5}x + \frac{8}{10})}$

$53 - 2x = 2x + 8$

$\overset{10}{(5.3 - 0.2x)} = \overset{10}{(0.2x + 0.8)}$

$53 - 2x = 2x + 8$

neediest decimal needs to move 1 place to the right  $\times 10$

LCD of 5 and 10 is 10

Pg. 320

$$(22) \frac{1}{2}k - 6 \geq -\frac{1}{6}k$$

The LCD of 2 and 6 is 6.

$$3k - 36 \geq -k$$

$$(23) \frac{1}{3}m - \frac{1}{2}m > -4$$

The LCD of 3 and 2 is 6.

$$2m - 3m > -24$$

$$(24) \frac{3.7z}{100} \leq \frac{33.32 - 3.1z}{100}$$

$$370z \leq 3332 - 310z$$

The neediest decimal needs to move 2 places to the right.  
 $\times 100$

$$(25) \frac{-0.6y - 3.79 + 5.2y}{100} < \frac{19.67}{100}$$

$$-60y - 379 + 520y < 1967$$

The neediest decimal needs to move 2 places to the right.  
 $\times 100$

Pg. 157 # 30 - 36

30.  $12 > 6 - 2x$  **FLIP**

$$\begin{array}{r} 12 > 6 - 2x \\ -6 > -2x \\ \hline 6 > -2x \\ \div 2 & \div 2 \\ -3 < x \end{array}$$

31.  $4p - 9 \geq -1$

$$\begin{array}{r} 4p - 9 \geq -1 \\ +9 & +9 \\ \hline 4p \geq 8 \\ \div 4 & \div 4 \\ p \geq 2 \end{array}$$

32.  $5(5 - 2x) > 15$  **FLIP**

$$\begin{array}{r} 25 - 10x > 15 \\ -25 & -25 \\ \hline -10x > -10 \\ \div -10 & \div -10 \\ x < 1 \end{array}$$

33.  $8g + 6 < 24$

$$\begin{array}{r} 8g + 6 < 24 \\ -6 & -6 \\ \hline 8g < 18 \\ \div 8 & \div 8 \\ g < 2\frac{1}{4} \end{array}$$

34.  $\frac{1}{3}y + 3 \leq 51$

$$\begin{array}{r} \frac{1}{3}y + 3 \leq 51 \\ -3 & -3 \\ \hline \frac{1}{3}y \leq 48 \\ \cdot 3 & \cdot 3 \\ y \leq 144 \end{array}$$

35.  $\frac{1}{6}(a - 12) \leq 20$

$$\begin{array}{r} \frac{1}{6}(a - 12) \leq 20 \\ \cdot 6 & \cdot 6 \\ a - 12 \leq 120 \\ +12 & +12 \\ \hline a \leq 132 \end{array}$$

36.  $-4 > 26 + 2x$

$$\begin{array}{r} -4 > 26 + 2x \\ -26 & -26 \\ \hline -30 > 2x \\ \div 2 & \div 2 \\ -15 > x \end{array}$$

Equivalent Inequalities  $x < -15$

Pg. 320 # 1 - 8

1. < : is less than

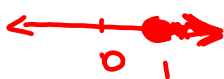
≤ : is less than or equal to

2. negative


> : is greater than

≥ : is greater than or equal to

③  $4a + 7 \geq 11$


$$\begin{array}{r} 4a + 7 \geq 11 \\ \hline 4a \geq 4 \\ a \geq 1 \end{array}$$


④  $16 < 3b + 22$

$$\begin{array}{r} 16 < 3b + 22 \\ \hline -22 & -22 \\ -6 < 3b \\ \hline -2 < b \end{array}$$


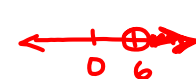
⑤  $7 - 2p \geq -5$

FLIP

$$\begin{array}{r} 7 - 2p \geq -5 \\ \hline -2p \geq -12 \\ \hline p \leq 6 \end{array}$$


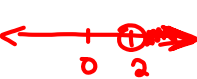
⑥  $-3y / 2 < -16$

FLIP


$$\begin{array}{r} -3y / 2 < -16 \\ \hline -3y < -32 \\ \hline y > 10 \frac{2}{3} \end{array}$$


⑦  $-2w + 6 < 2$

FLIP

$$\begin{array}{r} -2w + 6 < 2 \\ \hline -2w < -4 \\ \hline w > 2 \end{array}$$


⑧  $26s \leq 3s + 69$

$$\begin{array}{r} 26s \leq 3s + 69 \\ \hline -3s & -3s \\ 23s \leq 69 \\ \hline s \leq 3 \end{array}$$


Pg. 320 # 9-18

$$\begin{aligned} \textcircled{9} \quad 12c + 12 &> 48c \\ -12c \quad -12c \\ \hline 12 &> 36c \\ \frac{12}{36} &> \frac{36c}{36} \\ \frac{1}{3} &> c \\ \leftarrow \text{---} \textcircled{+} \text{---} \rightarrow \\ 0 \quad \frac{1}{3} \end{aligned}$$

$$\begin{aligned} \textcircled{10} \quad 5x - 14 &\leq 2x + 7 \\ -2x \quad -2x \\ \hline 3x - 14 &\leq 7 \\ +14 \quad +14 \\ \hline 3x &\leq 21 \\ \frac{3x}{3} &\leq \frac{21}{3} \\ x &\leq 7 \\ \leftarrow \text{---} \textcircled{+} \text{---} \rightarrow \\ 0 \quad 7 \end{aligned}$$

$$\begin{aligned} \textcircled{11} \quad 5 - 4z &> 17 - z \\ +4z \quad +4z \\ \hline 5 &> 17 + 3z \\ -17 \quad -17 \\ \hline -12 &> 3z \\ \frac{-12}{3} &> \frac{3z}{3} \\ -4 &> z \quad z < -4 \\ \leftarrow \text{---} \textcircled{+} \text{---} \rightarrow \\ -4 \quad 0 \end{aligned}$$

$$\begin{aligned} \textcircled{12} \quad 10 &\geq 5(3+t) \\ 10 &\geq 15 + 5t \\ -15 \quad -15 \\ \hline -5 &\geq 5t \\ \frac{-5}{5} &\geq \frac{5t}{5} \\ -1 &\geq t \\ \leftarrow \text{---} \textcircled{+} \text{---} \rightarrow \\ -1 \quad 0 \end{aligned}$$

$$\begin{aligned} \textcircled{13} \quad 2(5+n) &\leq 6 \\ 10 + 2n &\leq 6 \\ -10 \quad -10 \\ \hline 2n &\leq -4 \\ \frac{2n}{2} &\leq \frac{-4}{2} \\ n &\leq -2 \\ \leftarrow \text{---} \textcircled{+} \text{---} \rightarrow \\ -2 \quad 0 \end{aligned}$$

$$\begin{aligned} \textcircled{14} \quad -3(d+2) &< -3 \\ -3d - 6 &< -3 \\ +6 \quad +6 \\ \hline -3d &< 3 \\ \frac{-3d}{-3} &< \frac{3}{-3} \\ d &> -1 \\ \leftarrow \text{---} \textcircled{+} \text{---} \rightarrow \\ -1 \quad 0 \end{aligned}$$

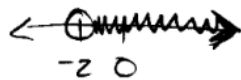
$$\textcircled{15} \quad 10a > -5(a+6)$$

$$10a > -5a - 30$$

$$+5a \quad +5a$$

$$\frac{15a > -30}{15 \quad 15}$$

$$a > -2$$



$$\textcircled{16} \quad 2(5x-4) \leq 8(x+1)$$

$$10x - 8 \leq 8x + 8$$

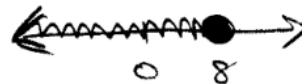
$$-8x \quad -8x$$

$$2x - 8 \leq 8$$

$$+8 \quad +8$$

$$\frac{2x \leq 16}{2 \quad 2}$$

$$x \leq 8$$



$$* \textcircled{17} \quad 4(6k-4) \geq 7k - (2k-3)$$

$$24k - 16 \geq 7k - 2k + 3$$

$$24k - 16 \geq 5k + 3$$

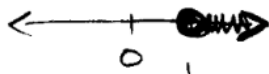
$$-5k \quad -5k$$

$$19k - 16 \geq 3$$

$$+16 \quad +16$$

$$\frac{19k \geq 19}{19 \quad 19}$$

$$k \geq 1$$



$$\textcircled{18} \quad -3b + 9 - 11b < 65$$

$$-14b + 9 < 65$$

$$\frac{-14b < 56}{-14 \quad -14}$$

$$b > -4$$

(B)

Is  $-5$  a solution?

$$-12x < 60$$

$$(-12)(-5) \stackrel{?}{<} 60$$

$$60 < 60 \quad \text{FALSE, NO}$$

Is  $-11$  a solution?

$$-x \geq 22$$

$$-(-11) \stackrel{?}{\geq} 22$$

$$11 \geq 22 \quad \text{FALSE}$$

Write an equivalent inequality.

$$15 < x$$

$$12 \geq x$$

$$x < 2$$

$$x > 15$$

$$x \leq 12$$

$$2 > x$$

Is  $-100$  a solution?

$$2x + 1 < 10$$

$$2(-100) + 1 \stackrel{?}{<} 10$$

$$-199 < 10 \quad \text{True}$$