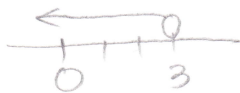


$$\textcircled{1} \quad 7x - 12 < 9$$

$$\quad \quad \quad +12 \quad +12$$

$$\frac{7x}{7} < \frac{21}{7}$$

$$x < 3$$



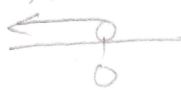
$$\textcircled{2} \quad \frac{3 \cdot 15 - 6x}{1} > 5 \cdot \frac{3}{1}$$

$$15 - 6x > 15$$

$$\quad -15 \quad \quad -15$$

$$\frac{-6x}{-6} > \frac{0}{-6}$$

$$x < 0$$



$$\textcircled{5} \quad \frac{1}{4}(x-1) \leq \frac{x+4}{6}$$

$$\frac{3}{3} \cdot \frac{x-1}{4} \leq \frac{x+4}{6} \cdot \frac{2}{2}$$

$$\frac{12}{1} \cdot \frac{3(x-1)}{12} \leq \frac{2(x+4)}{12} \cdot \frac{12}{1}$$

$$3(x-1) \leq 2(x+4)$$

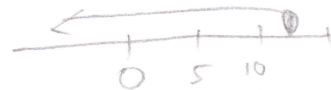
$$3x - 3 \leq 2x + 8$$

$$\quad -2x \quad \quad -2x$$

$$x - 3 \leq 8$$

$$\quad +8 \quad \quad +8$$

$$x \leq 11$$



$$\textcircled{7} \quad 8x + 3(x+1) > 5x - (9x-6)$$

$$8x + 3x + 3 > 5x - 9x + 6$$

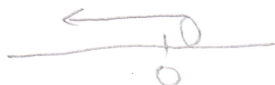
$$11x + 3 > -4x + 6$$

$$\quad +4x \quad \quad +4x$$

$$15x + 3 > 6$$

$$\quad -3 \quad \quad -3$$

$$\frac{15x}{15} > \frac{3}{15} \rightarrow x > \frac{1}{5}$$



$$\textcircled{9} \quad \frac{3}{3} \cdot \frac{x+2}{4} - \frac{4 \cdot 2 - x}{4 \cdot 3} + \frac{2 \cdot 4x - 5}{2 \cdot 6} < \frac{4}{1} \cdot \frac{12}{12}$$

$$\frac{12}{1} \cdot \frac{3(x+2) - 4(2-x) + 2(4x-5)}{12} < \frac{48}{12} \cdot \frac{12}{1}$$

$$3(x+2) - 4(2-x) + 2(4x-5) < 48$$

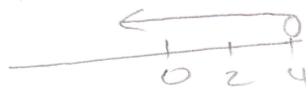
$$3x + 6 - 8 + 4x + 8x - 10 < 48$$

$$15x - 12 < 48$$

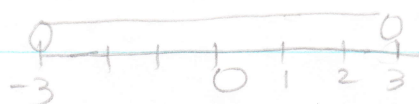
$$\quad +12 \quad +12$$

$$\frac{15x}{15} < \frac{60}{15}$$

$$x < 4$$



11 $|x| < 3 \rightarrow -3 < x < 3$



13 $|x| < -8$

The absolute value of a number is always positive and cannot be less than a negative # (-8)

15

$|x-4| < 3$

$-3 < x-4 < 3$

$+4 \quad +4 \quad +4$

$1 < x < 7$

no more absolute value



17 $|x+7| \geq 3$

$x+7 \geq 3$

$-7 \quad -7$

$x \geq -4$

OR

$x+7 \leq -3$

$-7 \quad -7$

$x \leq -10$



19 $|x-8| = 4$

$x-8 = 4$

$+8 \quad +8$

$x = 12$

OR

$x-8 = -4$

$+8 \quad +8$

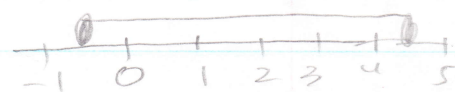
$x = 4$

21 $|2x-4| \leq 5$

$-5 \leq 2x-4 \leq 5$

$+4 \quad +4 \quad +4$

$-\frac{1}{2} \leq \frac{2x}{2} \leq \frac{9}{2}$



24 $|6-3x| < 12$

$-12 < 6-3x < 12$

$-\frac{18}{3} < \frac{-3x}{-3} < \frac{6}{-3}$

$6 > x > -2$

$-2 < x < 6$

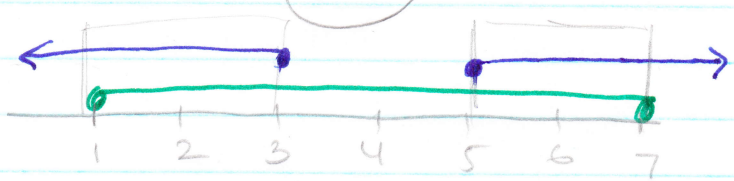


27 $1 \leq |x-4| \leq 3$

$|x-4| > 1$ and $|x-4| \leq 3$

$x-4 > 1$ or $x-4 < -1$ and $-3 \leq x-4 \leq 3$
 $+4 +4$ $+4 +4$ $+4 +4 +4$

$x > 5$ or $x \leq 3$ and $1 \leq x \leq 7$



must have green & blue

$1 \leq x \leq 3$ or $5 \leq x \leq 7$

