

Period _____

Name _____
Date _____

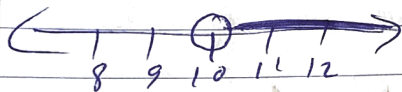
solving inequalities

$$1) \quad \begin{array}{r} x + 8 = 18 \\ -8 \quad -8 \\ \hline \end{array}$$

$$\boxed{x = 10}$$

$$1a) \quad \begin{array}{r} x + 8 > 18 \\ -8 \quad -8 \\ \hline \end{array}$$

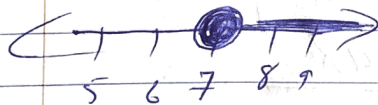
$$\boxed{x > 10}$$



$$2) \quad x - 1 \geq 6$$

$$\begin{array}{r} x - 1 \geq 6 \\ +1 \quad +1 \\ \hline \end{array}$$

$$\boxed{x \geq 7}$$



$$3) \quad \begin{array}{r} -2 + x \geq -8 \\ +7 \quad +7 \\ \hline \end{array}$$

$$\boxed{x \geq -1}$$



4) $2(9x-4) \geq 28$

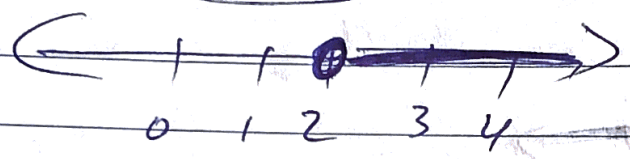
$$2(9x-4) \geq 28$$

$$18x - 8 \geq 28$$

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

$$\frac{18x}{18} \geq \frac{36}{18}$$

$$x \geq 2$$



5) $16 - \frac{7x}{3} > 11 - 4x$

$$16 - \frac{7}{3}x > 11 - 4x$$

$$\quad -16 \quad \quad -16$$

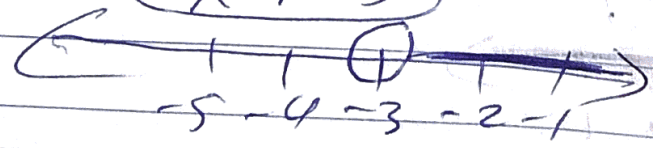
$$-\frac{7}{3}x > -5 - 4x$$

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

$$1\frac{2}{3}x > -5$$

$$\left(\frac{3}{3}\right) \frac{5}{3}x > -5 \left(\frac{3}{3}\right)$$

$$x > -3$$



$$\begin{array}{r} 3\frac{2}{3} \\ -2\frac{1}{3} \\ \hline 1\frac{1}{3} \end{array}$$

$$6) \frac{3x+2}{8} < 10 \Rightarrow 011x2-2$$

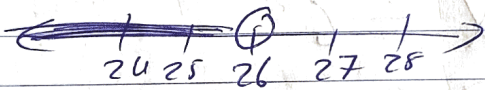
$$\frac{3x+2}{8} < \frac{10}{1}$$

$$1(3x+2) < 8(10)$$

$$\frac{3x+2}{-2} < \frac{80}{-2}$$

$$\frac{3x}{3} < \frac{78}{3}$$

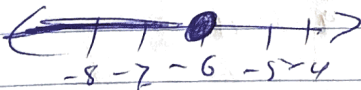
$$x < 26$$



$$7) -2x+4 \geq 16$$

$$\frac{-2x}{-2} \geq \frac{12}{-2}$$

$$x \leq -6$$

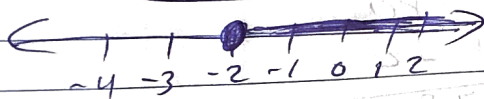


$$8) -5x + 10 \leq 20$$

$$\frac{-5x + 10}{-10} \leq \frac{20}{-10}$$

$$\frac{-5x}{-5} \leq \frac{10}{-5}$$

$$x \geq -2$$



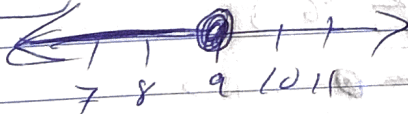
$$9) \frac{5}{3}x - x \leq 6$$

$$\frac{5}{3}x - 1x \leq 6$$

$$\left(1\frac{2}{3}x - 1x\right) \leq 6$$

$$\left(\frac{3}{2}\right) \frac{2}{3}x \leq 6\left(\frac{3}{2}\right)$$

$$x \leq 9$$



$$(10) \frac{x-3}{9} \geq 1$$

$$(9) \frac{x-3}{9} \geq 1(9)$$

$$\begin{array}{r} x-3 \geq 9 \\ +3 \quad +3 \\ \hline \end{array}$$

$$x \geq 12$$



$$(11) 6x+11 \leq 5x+12$$

$$\begin{array}{r} 6x+11 \leq 5x+12 \\ -11 \quad -11 \\ \hline \end{array}$$

$$\begin{array}{r} 6x \leq 5x+1 \\ -5x \quad -5x \\ \hline \end{array}$$

$$x \leq 1$$

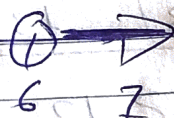
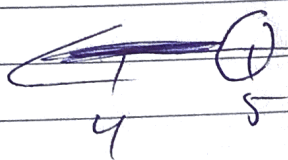


$$12) 2x < 10 \text{ or } \frac{x}{2} > 3$$

$$\frac{2x}{2} < \frac{10}{2} \text{ or } \frac{x}{2} > 3(2)$$

$$x < 5$$

$$x > 6$$



$$13) -36 < 3p - 6 < -15$$

$$-36 < 3p + 6$$

+6

$$\frac{-30}{3} < \frac{3p}{3}$$

$$-10 < p$$

$$3p - 6 < -15$$

+6

+6

$$\frac{3p}{3} < \frac{-9}{3}$$

$$p < -3$$

