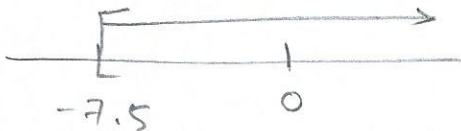


73)  $-2x - 4 \leq 11$

$-2x \leq 11 + 4$

$$\frac{-2x}{-2} \leq \frac{15}{-2}$$

$x \geq -7.5$



$$[-7.5, \infty) \quad \{x \mid x \geq -7.5\}$$

75)  $-12 > 7x + 9$

$-12 - 9 > 7x$

$$\frac{-21}{7} > \frac{7x}{7}$$

$-3 > x$

$x < -3$



$$(-\infty, -3) \quad \{x \mid x < -3\}$$

$$78) 3t \geq 7t - 35$$

$$3t - 7t \geq -35$$

$$\frac{-4t}{-4} \geq \frac{-35}{-4}$$

$$t \leq 8.75$$



$$(-\infty, 8.75] \quad \{t \mid t \leq 8.75\}$$

$$81) 8 - 6(x-3) > -4x + 12$$

$$8 - 6x + 18 > -4x + 12$$

$$-6x + 4x > 12 - 8 - 18$$

$$\frac{-2x}{-2} > \frac{-14}{-2}$$

$$x < 7$$



$$(-\infty, 7) \quad \{x \mid x < 7\}$$

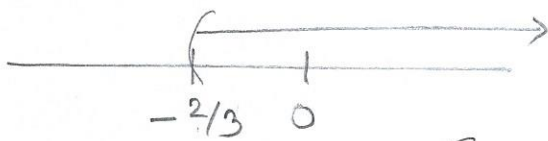
$$78) 2a + 3(a+5) > -4a - (3a-1) + 6$$

$$2a + 3a + 15 > -4a - 3a + 1 + 6$$

$$2a + 3a + 4a + 3a > 1 + 6 - 15$$

$$\frac{12a}{12} > \frac{-8}{12}$$

$$a > -\frac{2}{3}$$



$$\left(-\frac{2}{3}, \infty\right)$$

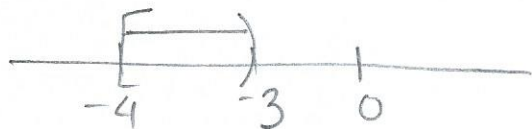
$$\left\{a \mid a > -\frac{2}{3}\right\}$$

$$96) -10 \leq 4x + 6 < -6$$

$$-10 - 6 \leq 4x + 6 - 6 < -6 - 6$$

$$\frac{-16}{4} \leq \frac{4x}{4} < \frac{-12}{4}$$

$$-4 \leq x < -3$$



$$[-4, -3)$$

$$\{x \mid -4 \leq x < -3\}$$

$$9a) \frac{x}{5} + \frac{x}{3} < 16$$

$$\frac{3 \cdot x}{3 \cdot 5} + \frac{5 \cdot x}{5 \cdot 3} < 16$$

$$\frac{3x}{15} + \frac{5x}{15} < 16$$

$$\frac{8x}{8} < \frac{240}{8}$$

$$x < 30$$



$$(-\infty, 30) \quad \{x \mid x < 30\}$$

$$10a) \frac{x-6}{2} + \frac{3}{8} \leq -\frac{x}{4}$$

$$\frac{4}{4} \cdot \frac{x-6}{2} + \frac{3}{8} \leq -\frac{x}{4} \cdot \frac{2}{2}$$

$$\frac{4(x-6)}{8} + \frac{3}{8} \leq -\frac{2x}{8}$$

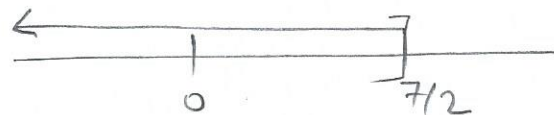
$$4(x-6) + 3 \leq -2x$$

$$4x - 24 + 3 \leq -2x$$

$$4x + 2x \leq 24 - 3$$

$$\frac{6x}{6} \leq \frac{21}{6}$$

$$x \leq \frac{7}{2}$$



$$(-\infty, 7/2] \quad \{x \mid x \leq 7/2\}$$

$\cap$  intersection and

$\cup$  Union or

$$A = \{1, 2, 3, 4, 5, 6\}$$

$$B = \{1, 3, 5, 7, 9\}$$

$$C = \{1, 3, 6, 12\}$$

$$A \cap B = \{1, 3, 5\}$$

$$A \cap C = \{1, 3, 6\}$$

$$B \cap C = \{1, 3\}$$

$$A \cup B = \{1, 2, 3, 4, 5, 6, 7, 9\}$$

$$A \cup C = \{1, 2, 3, 4, 5, 6, 12\}$$

$$B \cup C = \{1, 3, 5, 6, 7, 9, 12\}$$

$$\# (3, 7] \cap [4, 10) = [4, 7]$$



$$(3, 7] \cup [4, 10) = (3, 10)$$