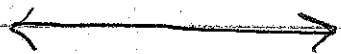
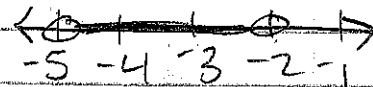


"And" Inequalities (#4)

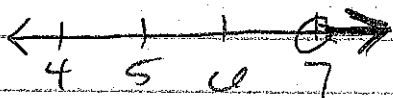
① $x > 4$ and $x < 2$
 $\boxed{\text{No Solution}}$



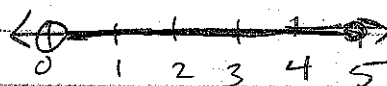
② $x < -2$ and $x > -5$
 $\boxed{-5 < x < -2}$ $(-5, -2)$



③ $x \geq 4$ and $x > 7$
 $\boxed{x > 7}$ $(7, \infty)$



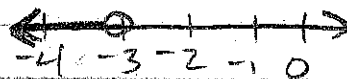
④ $x \leq 5$ and $x > 0$
 $\boxed{0 < x \leq 5}$ $(0, 5]$



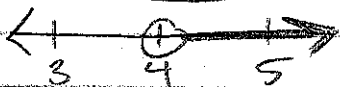
⑤ $x \geq 2$ and $x \leq 0$
 $\boxed{\text{No Solution}}$



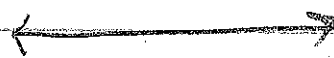
⑥ $x \leq 0$ and $x < -3$
 $\boxed{x < -3}$ $(-\infty, -3)$



⑦ $x > 4$ and $x \geq -5$
 $\boxed{x > 4}$ $(4, \infty)$



⑧ $x < -5$ and $x \geq 3$
 $\boxed{\text{No Solution}}$



⑨ $x \leq 0$ and $x \geq 0$
 $\boxed{x = 0}$

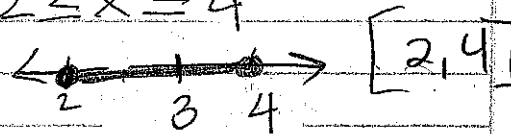


⑩ $x \geq 2$ and $x < 1$
 $\boxed{\text{No Solution}}$



⑪ $x+1 < 4$ and $x-4 > 5$
 $-1 -1$ $+4 +4$
 $x < 3$ and $x > 9$
 $\boxed{\text{No Solution}}$

⑫ $2x \leq 8$ and $-4x \leq -8$
 2 -4
 $x \leq 4$ and $x \geq 2$
 $2 \leq x \leq 4$



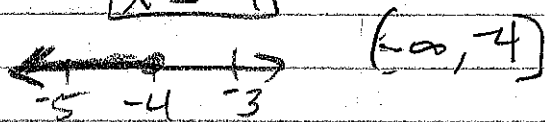
⑬ $x-5 \geq 3$ and $x+2 \leq 5$
 $+5 +5$ $-2 -2$
 $x \geq 8$ and $x \leq 3$
 $\boxed{\text{No Solution}}$



$$(14) \quad -3x \geq 12 \text{ and } 2x \leq 12$$

$$\begin{array}{r} -3 \\ x \leq -4 \text{ and } x \leq 6 \end{array}$$

$$\boxed{x \leq -4}$$



$$(15) \quad 5x - 4 \leq 6 \text{ and } 2x - 2 \leq -4$$

$$\begin{array}{r} 5x \leq 10 \\ 5 \end{array} \quad \begin{array}{r} 2x \leq -2 \\ 2 \end{array}$$

$$x \leq 2 \text{ and } x \leq -1$$

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

$$(-\infty, -1]$$



$$(16) \quad 3x - 2 \leq 13 \text{ and } -4x \leq -16$$

$$\begin{array}{r} 3x \leq 15 \\ 3 \end{array} \quad \begin{array}{r} -4x \leq -16 \\ -4 \end{array}$$

$$x \leq 5 \text{ and } x \geq 4$$

$$\boxed{4 \leq x \leq 5} \quad [4, 5]$$



$$(17) \quad \frac{1}{2}x - 2 > 2 \text{ and } -3x - 2 > 4$$

$$\begin{array}{r} 2(\frac{1}{2}x > 4) \\ x > 8 \end{array} \quad \begin{array}{r} -3(-3x > 6) \\ x < -18 \end{array}$$

$\boxed{\text{No Solution}}$

$$(18) \quad -4 \leq x + 6 \leq 0$$

$$\begin{array}{r} -6 \\ -10 \leq x \leq -6 \end{array}$$

$$\boxed{-10 \leq x \leq -6} \quad [-10, -6]$$

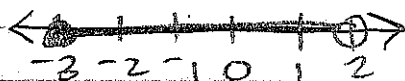


$$(19) \quad -2 \leq 2x + 4 < 8$$

$$\begin{array}{r} -4 \\ -6 \leq 2x < 4 \end{array}$$

$$\begin{array}{r} 2 \\ -3 \leq x < 2 \end{array}$$

$$\boxed{-3 \leq x < 2} \quad [-3, 2)$$



$$(20) \quad 0 < -4x + 4 < 12$$

$$\begin{array}{r} -4 \\ -4 < -4x < 8 \end{array}$$

$$\begin{array}{r} -4 \\ 1 > x > -2 \end{array}$$

$$\boxed{-2 < x < 1} \quad (-2, 1)$$

