

## Algebra 1 - Evaluating Inequalities

Solve each of the following:

**\*\*Solutions are indicated in [ ]\*\***

$$1. \frac{2}{5}x + 4 \leq \frac{7}{10}x - 8 \quad [x \geq 40]$$

$$2. 16 - 3x > -6x - 5 \quad [x > -7]$$

$$3. 7(2y - 3) \leq 5 - 2(3y - 1) \quad [y \leq 1.4]$$

$$4. -3 \leq 2x + 5 < 11 \quad [-4 \leq x < 3]$$

$$5. 4x + 5 < 3 \text{ or } 3x - 2 \geq 1 \quad [x < -0.5 \text{ or } x \geq 1]$$

$$6. -2 < \frac{4x-6}{3} \leq 6 \quad [0 < x \leq 6]$$

$$7. 3(2x - 5) \leq 4x + 7 \quad [x \leq 11]$$

$$8. \frac{2(x+4)}{3} < \frac{3x-5}{2} \quad [x > \frac{31}{5}]$$

$$9. 5(3x - 2) - 4(x + 1) \leq 2x + 9 \quad [x \leq \frac{23}{9}]$$

$$10. -3(2x + 4) \leq 6 - 5(x - 2) \quad [x \geq -28]$$

$$11. \frac{3(2x+5)-4(x-2)}{5} \leq \frac{7(x+1)-3(2x-3)}{4} \quad [x \leq -4]$$

$$12. 5 - 2(x + 3) < 3x + 4 \quad [x > -1]$$

$$13. \quad 6(x - 2) - 3x \geq 4 + 5(x + 1) \quad \left[ x \leq \frac{-21}{2} \right]$$

$$14. \quad \frac{5x+3}{2} > \frac{2x-1}{4} + x \quad \left[ x > \frac{-7}{4} \right]$$

$$15. \quad \frac{3(4x-1)+2(5x+3)}{6} > \frac{4(3x+2)-5(x-3)}{5} \quad \left[ x > \frac{123}{68} \right]$$