

Do Now: If $3(x+2) - 2(x+1) = 8$, then what is the value of x ?

Aim: Solving Inequalities

For #1- 10 : a) Express the solution set in in set notation and
b) Express the solution set graphically on the number line

1. $5x + 10 > 20$

2. $-6y + 2 > 26$

RULE: The cases that we flip the inequality symbol is when we _____

3. $\frac{x}{3} + 8 \neq 9$

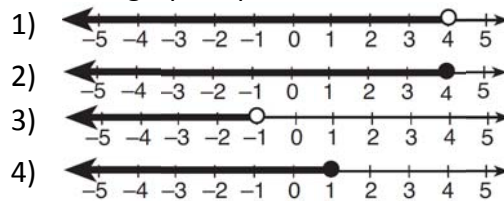
4. $4(x - 3) \geq 2(x - 2)$

5. What is the solution of the inequality

$$-6x - 17 \geq 8x + 25?$$

- 1) $x \geq 3$
- 2) $x \leq 3$
- 3) $x \geq -3$
- 4) $x \leq -3$

6. Which graph represents the solution set of $2x - 5 < 3$?



7. Which number is in the solution set of the inequality $5x + 3 > 38$?

- (1) 8 (2) 7 (c) 6 (4) 5

Practice Problems:

8. $-6(x - 5) \geq 30$

9. $\frac{1}{3}x - 4 \leq 2$

10. Which number is in the solution set of the inequality $6x + 2 < 8x + 14$?

- 1) -7
- 2) -6
- 3) -5
- 4) -10

11. $-1.6(x + 2) \leq 9.8$

Summary: What is the difference in solving the two inequalities below?

(a) $1 + 4x < 13$

(b) $1 - 4x < 13$