Grade: _____ = 50

Quiz #5 – Inequalities

Name: _____ Class: _____

Each multiple-choice question is worth 2 points

1.) Which of the following numbers is in the solution set of $2x + 7 > 13$?

(A) 1 (B) 2 (C) 3 (D) 4

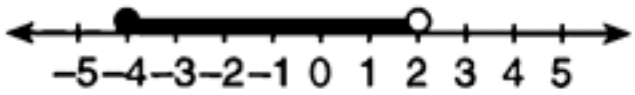
2.) Which of the following inequalities is the solution to $5 \geq x - 4$?

(A) $x \geq 9$ (B) $x \leq 9$ (C) $x \geq 1$ (D) $x \leq 1$

3.) If five times a number is less than 55, what is the greatest possible integer value of the number?

(A) 12 (B) 11 (C) 10 (D) 9

4.) Which inequality is represented in the following graph?

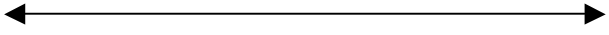


(A) $-4 \leq x < 2$ (C) $-4 < x \leq 2$

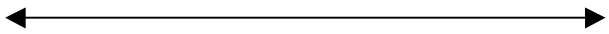
(B) $x \geq -4$ or $x < 2$ (D) $x > -4$ or $x \leq 2$

For 5 – 8, solve each inequality. Graph the solution set and **then list one solution that will satisfy the solution set.**

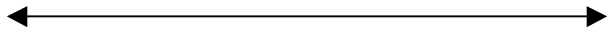
5.) $4x - 6 \geq 22$ **(3 points)**



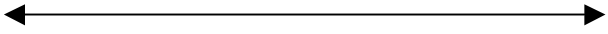
6.) $-3x + 5 - 4x < -16$ **(4 points)**



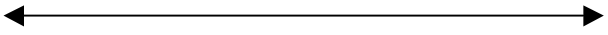
7.) $3(x + 4) \leq 4(x - 6)$ **(5 points)**



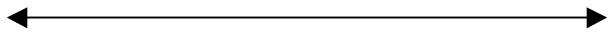
8.) $2(3b + 11) + 5 < 3(4b - 7)$ **(5 points)**



9.) Write an inequality and graph out the solution set for the expression, "You can eat *at most* 2000 calories in one day." **(2 points)**



10.) Write an inequality and graph out the solution set for the expression, "You must be *at least* 48 inches to ride the roller coaster." **(2 points)**



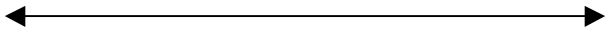
11.) Cody began his kindergarten year able to spell 10 words. He is going to learn to spell 2 new words every day.

a.) Write an inequality that can be used to determine how many days, *d*, it takes Cody to be able to spell *at least* 75 words. **(2 points)**

b.) Use this inequality to determine the minimum number of whole days it will take for him to be able to spell at least 75 words. **(2 points)**

12.) Graph the double inequality below. **(3 points)**

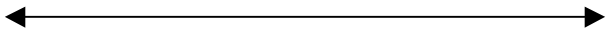
$a \leq 2$ or $a > -3$



13.) Solve and graph the solution set for the following double inequality.

(4 points)

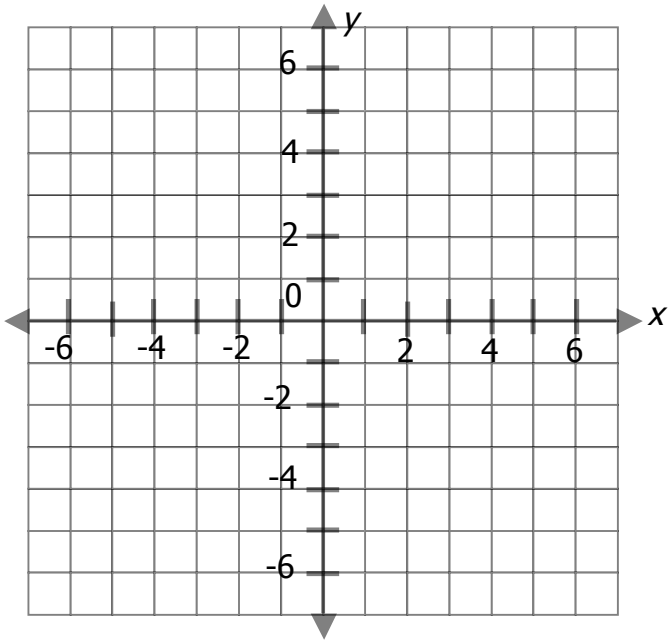
$20 < -3x + 11 \leq 29$



14.) Graph the following inequality.

$5x - 3y < 12$

(5 points)



15.) Find the equation of a line that is parallel to $2x = 3y + 9$ and passes through (6,3).

Find the equation **algebraically. (5 points)**