

Algebra 1 Quiz

10.25.13

Version A

Systems expert _____

period _____

Key

1) Simplify:

$$2(6x + 4) - 3(3x - 9)$$

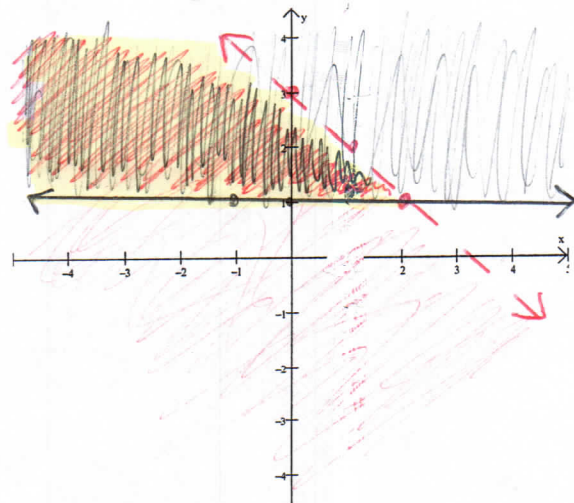
$$12x + 8 - 9x + 27$$

$$3x + 35$$

2) Graph the system linear inequalities

$$y < -x + 3$$

$$y \geq 1$$



3) Solve the system of linear equations

$$4y = 12 \rightarrow y = 3$$

$$5x - 12y = -16$$

$$3(-3x + 4y = 0) \rightarrow -9x + 12y = 0$$

$$-3x + 4y = 0$$

$$-3(4) + 4y = 0$$

$$-12 + 4y = 0 \rightarrow 4y = 12 \rightarrow y = 3$$

$$5x - 12(3) = -16$$

$$5x - 36 = -16$$

$$5x = 20 \rightarrow x = 4$$

(4, 3)

4) Solve and graph on a number line

$$\frac{1}{2}x - \frac{2}{3} > 4$$

$$+\frac{2}{3}$$

$$\frac{1}{2}x > 4 + \frac{2}{3}$$

$$4 + \frac{2}{3} = \frac{12}{3} + \frac{2}{3} = \frac{14}{3}$$

$$\frac{1}{2}x > \frac{14}{3}$$

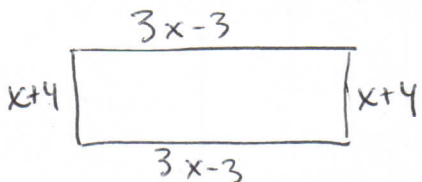
$$\times 2$$

$$x > \frac{28}{3}$$

$$x > 9\frac{1}{3}$$

$$x > 9.\bar{3}$$

5) Perimeter Question: A rectangle garden has a length of $3x - 3$ and a width of $x + 4$ and a perimeter of 58 feet. What is the length and width of the garden to the nearest foot?



$$2(3x - 3) + 2(x + 4) = 58$$

$$6x - 6 + 2x + 8 = 58$$

$$8x + 2 = 58$$

$$-2$$

$$8x = 56$$

$$x = 7$$

$$\text{length} = 3(7) - 3$$

$$21 - 3$$

length = 18 feet

$$\text{width} = (7) + 4$$

width = 11 feet

Bonus!! Solve the system

$$4y = -12x + 16 \rightarrow 12x + 4y = 16$$

$$3x + y = 4 \rightarrow -4(3x + y = 4) \rightarrow -12x - 4y = -16$$

0 = 0

Infinite solutions