Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Sect \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8th Gr: Linear Systems Review

Tell whether each system of linear equations has one solution, no solution, or infinite solutions (1 pt each)

Y = 3x – 4

Y = 3x + 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Y = 5x – 3

Y = 3x – 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Y = -9x + 2

Y = 9x – 2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Y = 4x + 8

-8x + 2y = 16 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3x + 6y = 12

Y = ½ x – 5 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Show whether the order pair is or isn’t a solution to the system of linear equations

(2 pts each)

(1, 9) \_\_\_\_\_\_\_\_\_\_\_\_ (11, 2) \_\_\_\_\_\_\_\_\_\_\_\_

Y = 2x + 7 y = x – 9

Y = 10x – 1 2x + 2y = 25

Use the graphing method to solve the following system of linear equations:

 (3 pts)

y = ½ x + 2

y = 2x – 10 Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Use the substitution method to solve the following systems: (3 pts each)

y = x – 7

y = 3x – 17 Solution : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Y = 2x + 8

-5x + y = 5 Solution : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Use the elimination method to solve the following systems: (3 pts each)

 x + 3y = 16

2x – 3y = 14 Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 2x + 2y = 8

 2x + 5y = 26 Solution : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3x + y = 23

x – 2y = -18 Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Solve the following systems using whatever method you prefer**. Use the word problems to write linear equations, and then solve the systems using whatever method you prefer. Be sure to show all work. A graph is included on the page if you choose to use the graphing method: (4 pts each)

Two tanks of water are being emptied at different rates. The first tank holds 12 gallons, and is being emptied at a rate of 2 gallons per minute. The second tank holds 8 gallons, but is being emptied at a rate of ½ gallon per minute. After how many minutes will the two tanks have the same amount of water?

1st tank equation : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2nd tank equation : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solution : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Mr. Rich has a total of $135, consisting of all either $20 bills or $1 bills. He has a total of 21 bills. How many $20 and how many $1 bills does he have ?

Identify your variables :

X = \_\_\_\_\_\_\_\_\_\_\_\_

Y = \_\_\_\_\_\_\_\_\_\_\_\_

Write your equations :

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solution : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_