CC8 Linear Algebra Review Part II Name: Key Date:_____

Solve the following systems of equations. Use any of the three strategies (equality, substitution, or elimination).

1. $x - y = -11$
$7x + 4y = -22$

$(-6, 5)$

2. $y = 7 - 3x$
$-2y + 6x = 14$

$(7/3, 0)$

3. $2x + 3y = 2$
$4x - 9y = -1$

$(1/2, 1/3)$

4. $y = x - 11$
$y = 19 - 2x$

$(10, -1)$

6. Write and solve a system of equations.
The sum of two numbers is 54. The difference of the two numbers is 20. What are the two numbers?

37 & 17

7. Shawn and Samantha are selling flower bulbs for a school fundraiser. Customers can buy bags of tulip bulbs and bags of daffodil bulbs. Shawn sold 10 bags of tulip bulbs and 12 bags of daffodil bulbs for a total of $380. Samantha sold 6 bags of tulip bulbs and 8 bags of daffodil bulbs for a total of $244. What is the cost each of one bag of tulip bulbs and one bag of daffodil bulbs?

Define your variables
Write two equations to represent the situation
Solve using a system of equations

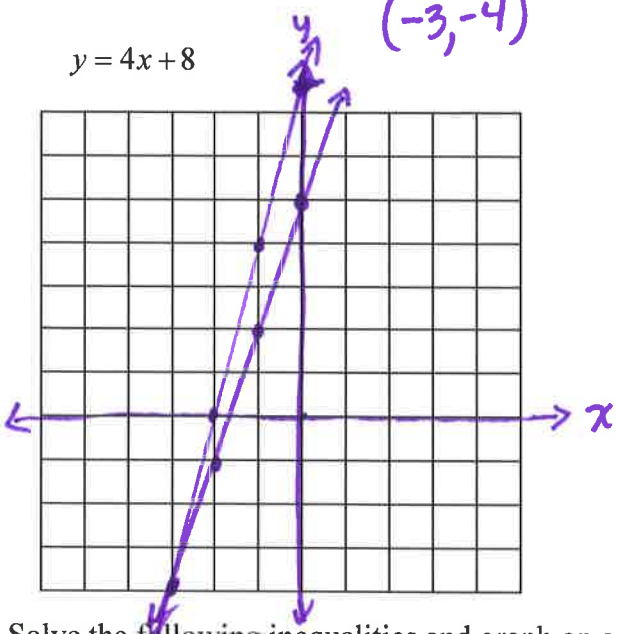
Tulip bulbs are $14.
Daffodil bulbs are $20

8. Graph the following systems of equations.

a. $y = 3x + 5$

$y = 4x + 8$

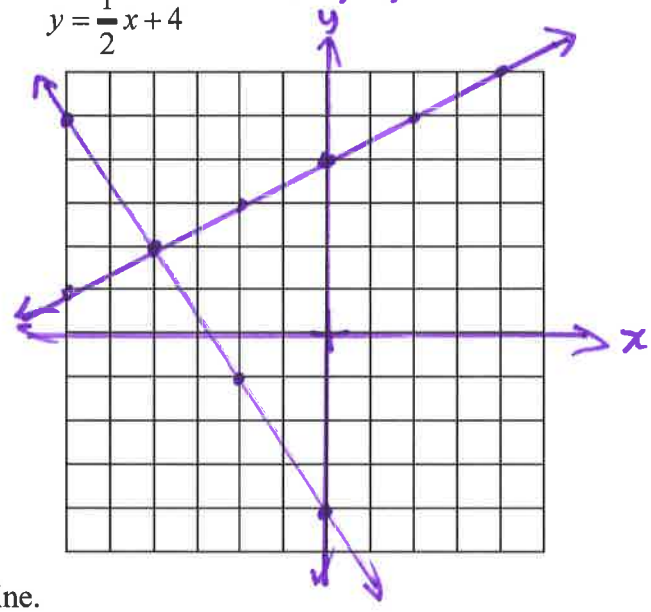
(-3,-4)



b. $y = -\frac{3}{2}x - 4$

$y = \frac{1}{2}x + 4$

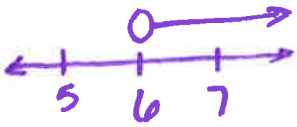
(-4,2)



9. Solve the following inequalities and graph on a number line.

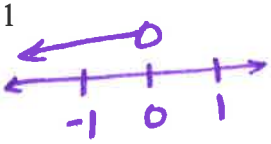
a. n – 3 + 4 > 7

$n > 6$



b. -9 < -8 (1 + 6v) - 1

$v < 0$



c. $8(1 - 4x) \geq 40$

$x \leq -1$

d. 5 + 4x > x + 8

$x > 1$

11. Simplify the following expression completely. Final answers should not have negative exponents or an exponent of zero.

a. $y^5 \bullet y^7$

y^{12}

b. $\frac{x^{10}}{x^5}$

x^5

c. $(x^3y^2)^3$

x^9y^6

d. $(2y^{-4})^3$

$\frac{8}{y^{12}}$

e. $4x^5y \bullet -2x^2y^4$

$-8x^7y^5$

f. $\frac{(x^3)^7}{(x^2)^8}$

x^5