Name: _____ Date: _____

BLM 9–5

Section 9.1 Extra Practice

1. Solve the following systems of linear equations by substitution. Verify your answers.

a) $2x - 3y + 17 = 0$

$y = -5x$

b) $4x + y = 1$

$x = 2y - 20$

c) $y = -5x - 8$

$y = 4x + 1$

2. Solve the following systems of linear equations by substitution by first isolating x.

a) $x + y = 9$

$-10x + 6y = 6$

b) $x - 3y = 4$

$5x - 7y = 4$

c) $2x + 3y = 20$

$6x - y = 20$

3. Solve the following systems of linear equations by substitution by first isolating y.

a) $x - y = -2$

$-2x + y = 7$

b) $-3x + y = -3$

$5x - 2y = 10$

c) $2x + 3y = 20$

$6x - y = 20$

4. Compare your work for #2c) and 3c). Which method did you prefer for solving? Why?

5. Solve the following systems of linear equations by substitution.

a) $0.4x + y = 6$

$1.2x - 5y = 18$

b) $x + 0.03y = 10$

$10.4x + 0.75y = 980$

c) $5x - 0.5y = 31$

$2.5x + 3y = 9$

6. Solve the following systems of linear equations by substitution.

a) $8x + y - 2 = 0$

$3x + \frac{1}{4}y = 0$

b) $\frac{x}{2} + \frac{y}{3} = 6$

$3x - 2y = 12$

c) $\frac{x}{6} + \frac{y}{2} = 2$

$\frac{-x}{5} - \frac{y}{3} = 0$

7. Use the following system of linear equations to complete parts a) to c):

$2x - y = -7$

$3x + 2y = 5$

a) Solve the system by drawing a graph.

b) Solve the system by substitution.

c) Compare your answers to parts a) and b). What is the advantage of the algebraic approach?

8. Maria has a total of 20 nickels and quarters. She has four times as many nickels as quarters. How much money does Maria have?

9. The perimeter of a rectangle is 48 cm. The width is one third the length. Determine the dimensions of the rectangle.

10. A number is 12 less than one third of another number. Their sum is 56. What are the numbers?