Name: _____

Place your answers in the spaces provided. There is no partial credit on problems 1-3. You must show correct work to receive credit.

(8 pts) 1. Perform the indicated operation and simplify.

$$(4x^3 + 5x - 3) - (3x^3 - 2x^2 + 7x - 4)$$

(8 pts) 2. Find the x-intercept of the line given by the equation $y = -\frac{1}{2}x + \frac{3}{5}$.

x- intercept:

(8 pts) 3. Given the functions f(x) = 5 - 2x and $g(x) = 2x^2 - 3$, find (f - g)(-3).

$$(f-g)(-3) =$$

Exam 2

Name: _

Place your answers in the spaces provided. You must show correct work to receive credit.

(10 pts) 4. Solve the following inequality. Express your answer in terms of intervals. 4(1-2y) = 5(y+3)

(8 pts) 5. Find the equation of the line which passes through the point (6, -7) and has slope of $-\frac{1}{3}$. Leave your answer in the form y = mx + b.

(10 pts) 6. Given the function $h(x) = \frac{2x^2 + 1}{x - 4}$, find and simplify the following:

(4 pts) (a) h(-2)

y =

(6 pts) (b) h(3a)

$$h(3a) =$$

Name: _____

Place your answers in the spaces provided. You must show correct work to receive credit.

(12 pts) 7. Solve the following system of equations. Express your answer as an ordered pair.

3a + 4b = 3a = 2b - 4



(10 pts) 8. Perform the indicated operation and simplify.

(5 pts) (a) $(3x - 2y)^2$

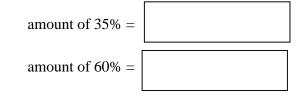
(5 pts) (b) (2a+5b)(a-3b)

Exam 2

Name:

Place your answers in the spaces provided. You must show correct work to receive credit.

(12 pts) 9. A silversmith has two alloys, one containing 35% silver and the other containing 60% silver. How much of each should be melted and combined to obtain 118 grams of an alloy containing 50% silver? (Name the variable(s), set up an equation(s), and solve.)



- (14 pts) 10. The value of a machine two years after it was purchased was \$15,625. Six years after it was purchased, the value of the machine was \$8,125. Assume that the value, V, of the machine is linearly related to time, t, in years since it was purchased.
 - (10 pts) (a) Find a linear function, V(t), that fits the data. (Hint: find two points)



(4 pts) (b) Use your function from part (a) to find how long after it was purchased the machine was worth \$6,250.

how long =

Name: _____