Math 8-2  **Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Project #8 January 2015**

Ms. Dowson

*Due*:  **Tuesday February 3, 2015**

*Spot Check*: Last Day, **Monday February 4, 2015**

1. Solve for the variable indicated in each formula:

a) A = P + P*rt* for *r*

b)  for *h*

2. Four hamburgers and three orders of fries cost $4.65. Five hamburgers and two orders of fries cost $4.85. How much does one hamburger and one order of fries cost?

3. The money a shopkeeper takes in varies directly with the number of customers that enter the shop. After 8 customers, the shopkeeper had $30. How many customers would he need in order to take in $135?

4. Change these equations into slope-intercept form.

a) 

b) 

5. Change these equations to standard form.

a) 

b) 

6. Change these equations to point-slope form.

a) 

b) 

Solve each of the following linear systems using a different method (graphing, substitution, and elimination).

7. 

y

x

5

-5

-5

8. 

9. 

10. A fish was caught whose tail weighed 9 pounds. His head weighed as much as his tail and half his body, and his body weighed as much as his head and tail. How much did the fish weigh?

11. A sprinkler in the middle of a rectangular lawn sprays water in a circular pattern as shown.

*x*   *x*

watered lawn



unwatered

lawn

1. Write a polynomial to model the area of the entire lawn.
2. Write a polynomial to model the area that is watered by the sprinkler.
3. Write a polynomial to model the area of the lawn that is *not* watered. Use 3.14 for 

12. A dog leaps into the air to catch a frisbee. His height *h* (in feet) can be modeled by the function where *t* is the time (in seconds) since the dog left the ground.

a. Find the zeros of the function.

b. In one or two sentences, explain what the zeros mean in this situation.

c. What is the real-world domain of the function? Why?