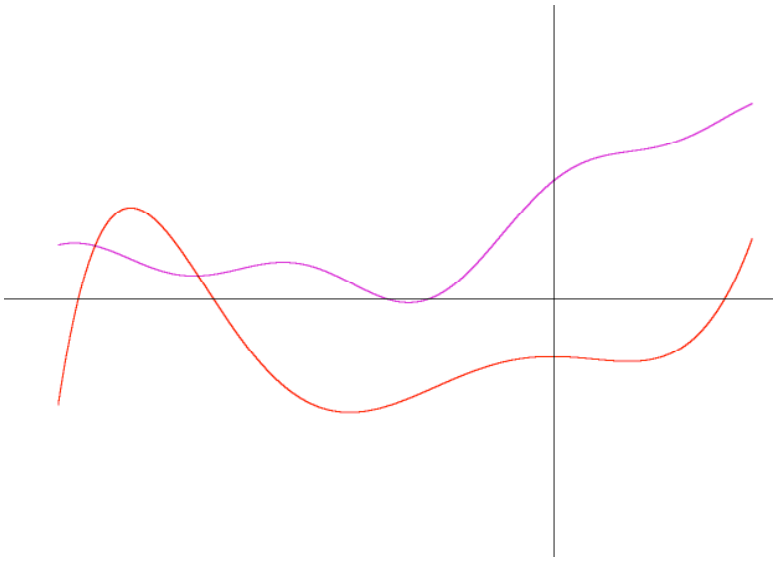
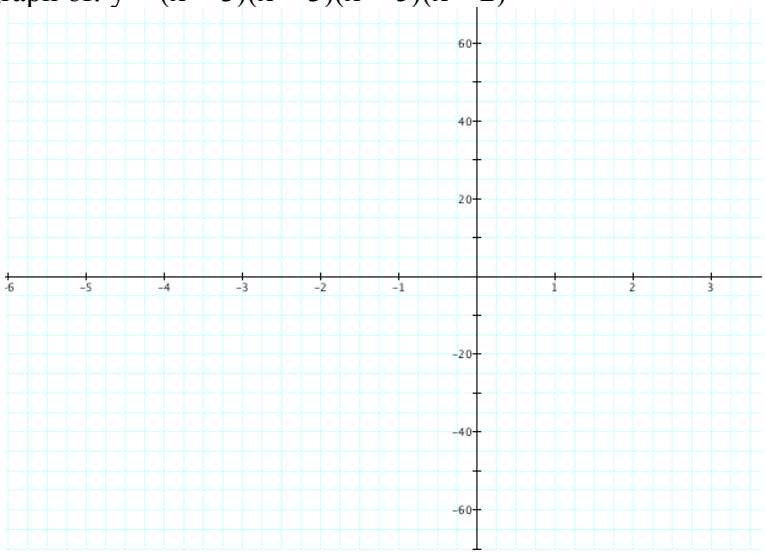
Coombs 1st Period Math 2 Name: _____

Graphs, Sums, and Factored Form Quiz
April 5, 2007

1) Two functions, *f* and *g*, have the graphs given below. Sketch a graph of the sum of *f* and *g*:

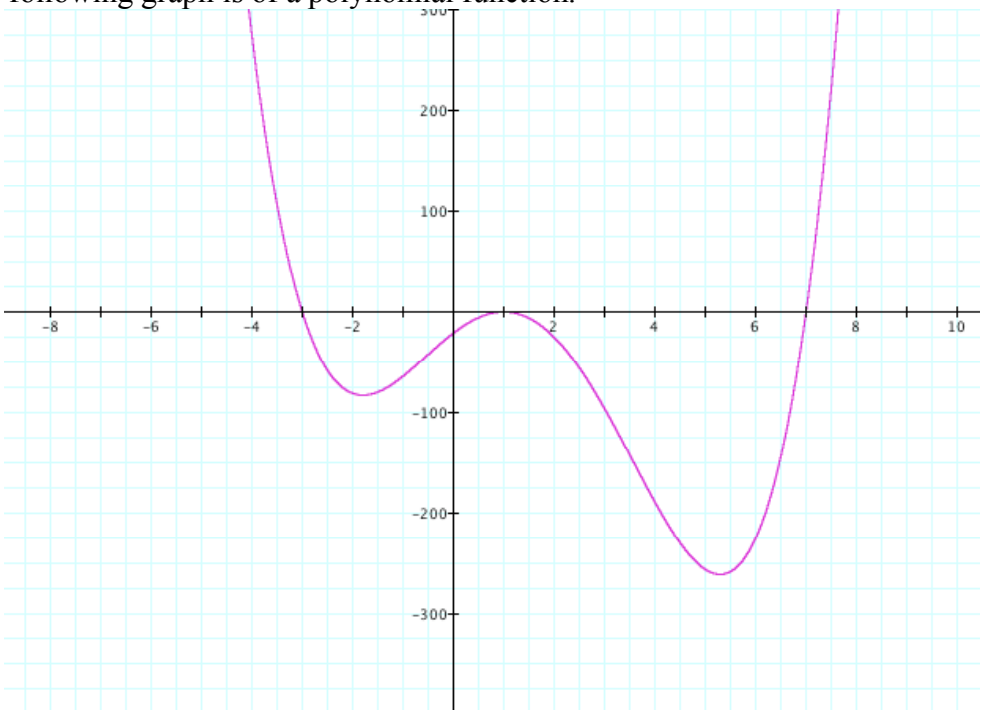


2) Sketch the graph of: y = (x + 3)(x + 3)(x + 5)(x – 2)



Coombs 1st Hour topics 2 Quiz Name: _____
April 5, 2007

3) The following graph is of a polynomial function.



a. Write the function's definition in factored form.

b. Answer this question without expanding the factored form you wrote in part (a).

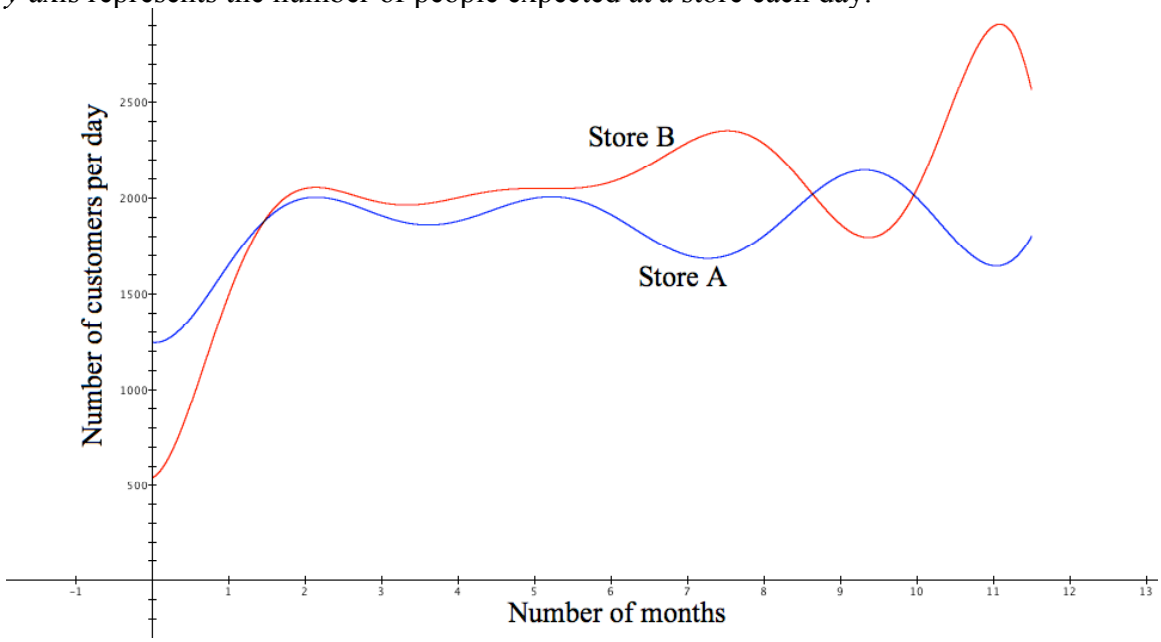
When the function's definition is written in standard form, the largest exponent of *x* is _____ because

Expand the following function definitions:

4) $(2x - 5)(x + 3)$ 5) $(x - 9)(2x - 1)$ 6) $(x + 4)(x^2+5x+7)$

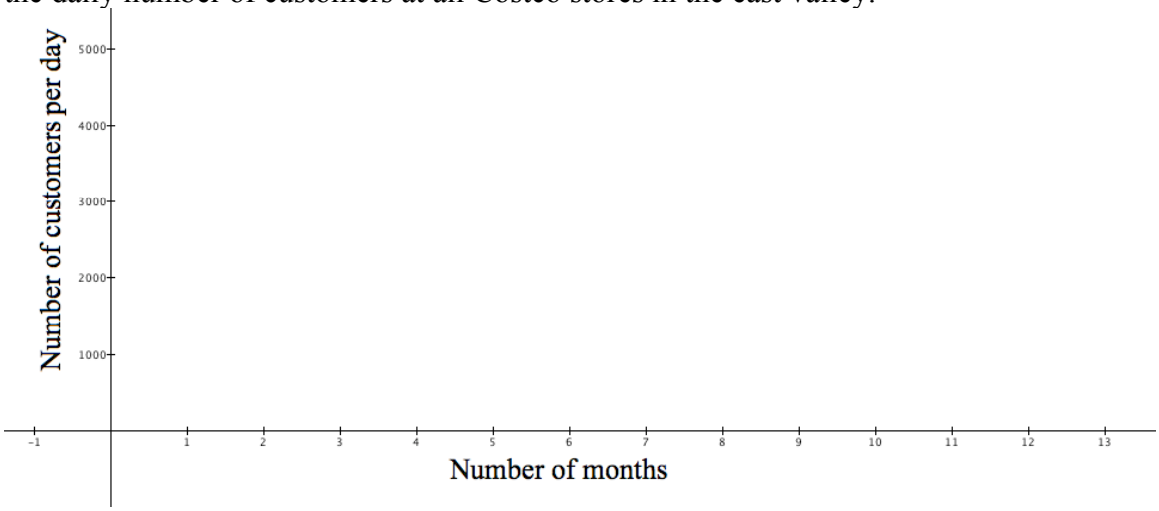
Coombs 1st Hour topics 2 Quiz Name: _____
April 5, 2007

7) Costco has two stores in the east valley. Corporate headquarters has asked them to estimate the number of employees they will need over the upcoming year. Each store manager produced a graph (based on historical data) of the anticipated number of customers per day at that store. Their two graphs are shown below on the same coordinate system. The *x* axis represents the number of months in the upcoming year. The *y* axis represents the number of people expected at a store each day.



a.). What does the point (6.25,1854) represent on Store A's graph?

b) The corporate office does all the hiring for these stores. So it only needs to have an estimate of the stores' *total* number of customers. Using the axes below, sketch a graph of the daily number of customers at all Costco stores in the east valley.



Coombs 1st Hour topics 2 Quiz
April 5, 2007

Name: _____

8) Explain the following about the graph of the function $y = x^{62}$

a) Why are the y-values always positive?

b) Why does the graph look so "flat" between -1 and 1?

c) Describe the function's behavior as *x* varies from 0.5 to 1.5.