Name:_____Date:_____Class:_____

Unit 2- Section 1 Quiz

1. A rectangular schoolyard is to be fenced in using the wall of hte school for one side and 150 meters of fencing for the other three sides. The area *A(x)* in square meters of the schoolyard is a function of the length *x* in meters of each of the sides perpendicular to the school wall.

    a. Write an expression for *A(x).*

    b. What is the area of the schoolyard when x= 40?

    c. What is a reasonable domain for A in this context?

2. An account grows at an annual interest rate of r, so it grows by a factor of $x = 1 + r$ each year. The function $A(x) = 800x^4 + 350x^3 + 500x^2 + 600x$ gives the amount in the account after 4 years when the growth factor is x .

    a. What is the total amount in the account if the interest rate for the account is 3% each year?

    b. How much money was put into the account at the beginning?

    c. After the 4th year, $200 is added to the account. Use the expression $A(x)$ to write a new expression $B(x)$ that represents how much is in the account after 5 years.

3. Identify the degree, leading coefficient, and constant value of the polynomial:

    $f(x) = x^3 - 8x^2 - x + 8$

    Degree:_____ leading coefficient:_____ Constant value:_____