BECA / Huson / Algebra 2: Polynomials
20 October 2023

Name: Solutions

2.3 Quiz: Calculator use with polynomials

1. With or without a calculator, evaluate each polynomial for the given value of x.

   (a) $f(x) = 2x^3 + 7x^2 - 3x + 5$, $x = 0$
   $f(0) =$ 5

   (b) $g(x) = x^4 + 7x^3 - 2$, $x = 1$
   $g(1) =$ 6

2. Use a calculator to find the value of $h(x) = x^3 + 5x^2 - 4x + 12$ for $x = -7$.
   $h(-7) =$ -58

3. A polynomial A is used to model the value of an investment account. Two deposits were made which earned interest annually.

$$A(x) = 650x^6 + 400x^3$$

   (a) The first deposit of \$650 was made six years ago. How much was the second deposit, and how long ago was it made?

   \$400 three years ago

   (b) Find the value of $A(x)$ for $x = 1.06$ to the *nearest cent.*

   $A(1.06) = \$1398.443823$
   $\approx \$1398.44$

   (c) If the interest rate earned on the account is $r = 4\frac{1}{2}\%$ what value of x would be used in the formula?

   1.045