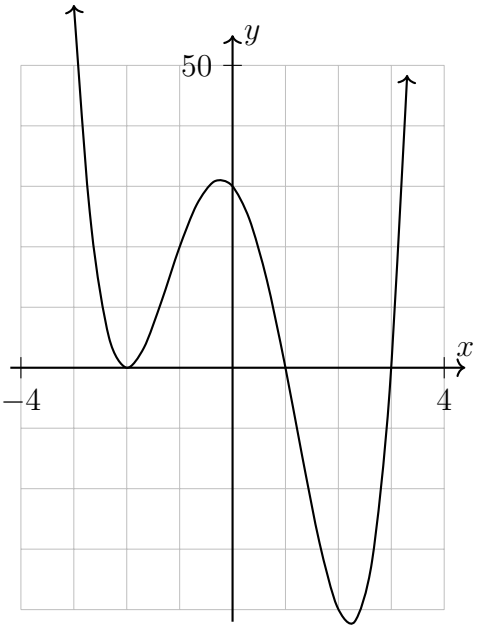
BECA / Huson / Algebra 2: Polynomials Name:
1 December 2023

2.15 Quiz: Quadratic functions and review

A2-F.IF.7c Graph polynomials, identify zeros, end behavior

9. The polynomial $f(x)$ is graphed below.



   (a) What is the degree of the function?

   (b) What are zeros of the function?

   (c) What factor has a multiplicity of 2?

   (d) Write down the y-intercept as an ordered pair.

   (e) Is the leading coefficient positive, negative, or zero?

   (f) Describe the end behavior.

A2-F.BF.2 Write arithmetic and geometric sequences with recursive formulas

10. Write a recursive definition of the sequence $a_1 = 3$, $a_2 = 8$, $a_3 = 13$, $a_4 = 18, \ldots$

11. Find the difference $f(x) - g(x)$ as a polynomial in standard form, given $f(x) = 4x^4 + 5x^3 - 3x$ and $g(x) = 2x^3 - 2x^2 - 3x - 1$.