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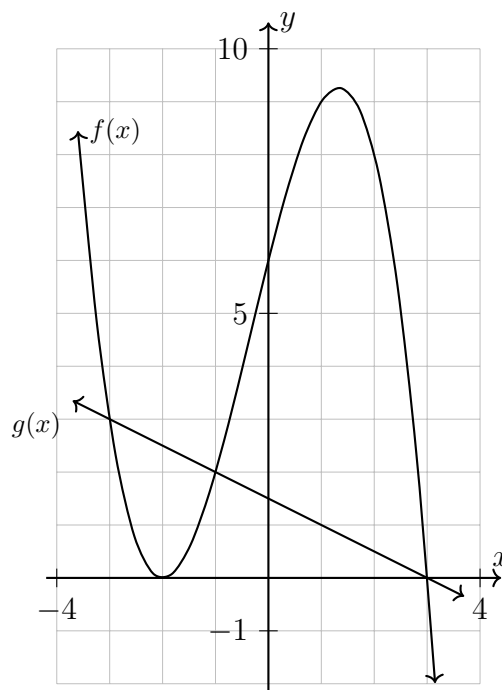13 December 2023

2.22 Do Now Quiz: Sequences, polynomials, exam review

A2-APR.1 Perform operations with polynomials

1. Find the sum in standard form $(4x^4 + 5x^3 + 3x^2 - 4) + (x^4 - 2x^3 - 2x^2 - x + 1)$.

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

2. The polynomial $f(x)$ and linear function $g(x)$ are graphed below.

   (a) What is the degree of $f(x)$?

   (b) Is the leading coefficient of $f(x)$ positive, negative, or zero?

   (c) If the polynomial $f(x)$ is written as the product of linear factors, what factor would be squared?

   (d) Write down the three solutions to $f(x) = g(x)$ as ordered pairs.

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

3. Write a recursive definition of the sequence $a_1 = 4$, $a_2 = 12$, $a_3 = 36$, $a_4 = 108, \ldots$