BECA / Huson / Algebra 2: Polynomials
13 December 2023

Name: SOLUTIONS

2.22 Do Now Quiz: Sequences, polynomials, exam review

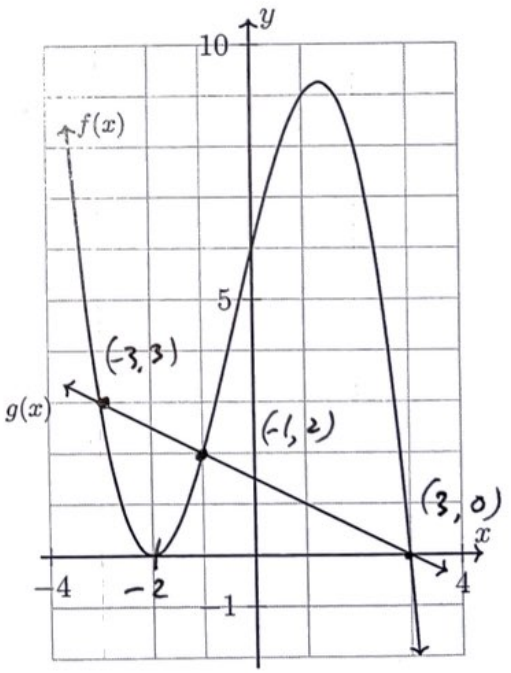
A2-APR.1 Perform operations with polynomials

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

$= 5x^4 + 3x^3 + 1x^2 - x - 3$

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 $f(x)$?

3

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

negative

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

$(x+2)$

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

$(-3, 3)$, $(-1, 2)$, $(3, 0)$

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

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

$a_1 = 4$

$a_n = 3a_{n-1}$