BECA / Huson / Algebra 2: Polynomials
8 December 2023

Name: SOLUTIONS

2.20 Do Now Quiz: Using the calculator with polynomial functions

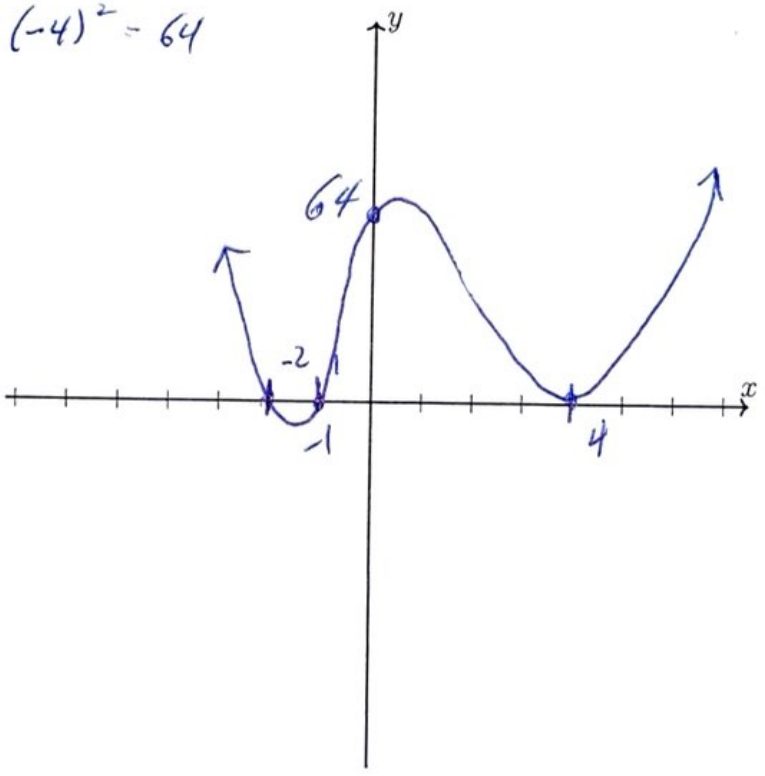
A2-F.IF.7c Graph polynomials, identify zeros, end behavior

1. Let f be a polynomial function of x where $f(x) = x^3 + 4x^2 - 7x - 10$. If $x - 2$ is a factor of f, write an equation for f as a product of linear factors.

$f(x) = (x-2)(x+5)(x+1)$

2. Let $g(x) = 2(x+2)(x+1)(x-4)^2$ be a polynomial function.

$2 \cdot 2 \cdot 1 \cdot (-4)^2 = 64$



(a) Sketch a graph of the function.

(b) Name all horizontal and vertical intercepts of the graph.

(c) State the end behavior of g.

$x \to +\infty \quad y \to +\infty$

$x \to -\infty \quad y \to +\infty$