

Math Virtual Learning

Algebra 2A Polynomial Parent Functions

May 20, 2020



Lesson: Sketching Polynomial Parent Functions

Learning Target:

LT C2 I can identify key features (zeros, multiplicity, end behavior, y-intercept, local minimums and maximums, turning points, transformations).

Objective:

Students will be able to identify parts of a graph.

Warm Up

Match each polynomial function to its graph.

$$f(x) = -x^{3} - 24x^{2} - 192x - 512$$

$$g(x) = x^3 - 21x^2 + 144x - 323$$



Warm Up Answers





Today, we will be learning about multiplicity of zeros in both graphs and equations in intercept form.

Find the Multiplicity and Zeros of a Polynomial when It is in Factored Form: https://www.youtube.com/watch?v=Y6l0aZ5Cg84

Multiplicity of zeros of polynomials | Polynomial graphs | Algebra 2 | Khan Academy: <u>https://www.youtube.com/watch?v=jrFLb9ZoZH0</u>

Practice

Find the zeros and the multiplicity of the equations.

1.
$$y = x(x + 2)(x - 2)$$

2. $y = x(x + 2)^{2}(x - 2)$
3. $y = (x + 3)(x + 1)(x - 2)^{3}$
4. $y = (x - 1)^{2}(x + 2)^{3}(x - 2)$

Answers to Practice Problems





For extra practice on solving quadratic equations using the zero product property, click <u>here</u>.