

# **Math Virtual Learning**

# Algebra 2A Polynomial Parent Functions

May 8, 2020



#### Lesson: Sketching Polynomial Parent Functions

### Learning Target:

LT C1 I can create a sketch of a polynomial function from an equation and create a polynomial equation from a graph.

### **Objective:**

Students will be able to sketch functions for polynomial functions by using parent function transformations. Students will be able to create an equations from a graph.

## Warm Up

For each of the following, graph the parent function.

1. 
$$y = (x + 5)^3$$
  
2.  $y = \sqrt{x - 2}$   
3.  $y = \frac{1}{2}|x|$ 

Warm Up Answers

2.



1.

5 -5 5 0 5

3.





For today, we will continue practice writing equations from graphs.

Rewatch yesterday's videos, if necessary.

Hints for the order of finding equation pieces:

- 1. Identify the parent function
- 2. Look to see if the graph has been moved left or right from the parent (h)
- 3. Look to see if the graph has been moved up or down from the parent (k)
- 4. Has it been flipped over. If yes then you know "a" is negative.
- 5. Has it been stretched or compressed compared to the parent. (a)

#### Practice

Write the equation for each of the following:



#### More Practice

3.



4.



#### Answers to Practice Problems

$$y = \sqrt{x - 1} + 2$$
  
$$y = (x - 1)^{2} + 1$$
  
$$y = 2(x + 2)^{3} - 1$$
  
$$y = |x - 3| + 2$$