## Math Virtual Learning

## Algebra 2A <br> 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.

$$
\begin{aligned}
& \text { 1. } \mathrm{y}=(\mathrm{x}+5)^{3} \\
& \text { 2. } \mathrm{y}=\sqrt{x-2} \\
& \text { 3. } \mathrm{y}=\frac{1}{2}|\mathrm{x}|
\end{aligned}
$$

## Warm Up Answers

1. 


2.

3.


## Lesson

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:

2.


## More Practice

3. 


4.


## Answers to Practice Problems

$$
y=\sqrt{x-1}+2
$$

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

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

$$
y=|x-3|+2
$$

