

Topic/Objective: Parent Functions Date: 8/25

Essential Question: How do you graph parent functions?


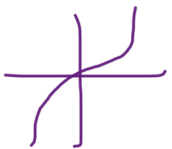


Parent Function: simplest form of a function that can be transformed

<u>Quadratic Function</u>	<u>Cubic Function</u>	<u>Line Function</u>	<u>Absolute Value Function</u>												
$y = x^2$ <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td>x</td><td>y</td></tr> <tr><td>-2</td><td>4</td></tr> <tr><td>-1</td><td>1</td></tr> <tr><td>0</td><td>0</td></tr> <tr><td>1</td><td>1</td></tr> <tr><td>2</td><td>4</td></tr> </table>	x	y	-2	4	-1	1	0	0	1	1	2	4	$y = x^3$	$y = x$	$y = x $
x	y														
-2	4														
-1	1														
0	0														
1	1														
2	4														
"parabola"															

All parent functions go through (0,0)

Fill in the table.

Equation	Equation of Parent Graph	Shape	Translate Horizontally	Translate Vertically
1) $y = (x - 2)^2$	$y = x^2$			
2) $f(x) = x^3 + 3$	$y = x^3$			
3) $g(x) = (x - 1) + 3$	$y = x$			
4) $y = x + 4 + 5$	$y = x $			

5) $h(x) = (x - 3)^2 - 3$	$y = x^2$			
6) $f(x) = (x - 1)^3$	$y = x^3$			
7) $g(x) = x - 2$	$y = x $			
8) $h(x) = (x + 2) - 6$	$y = x$			

Graph the parent graph and the function for the following numbers.

A) $y = (x - 2)^2$

B) $f(x) = x^3 + 3$

C) $y = |x + 4| + 5$

D) $h(x) = (x - 3)^2 - 3$

Summary: