

Name: \_\_\_\_\_ Date: \_\_\_\_\_ Period: \_\_\_\_\_

## Parameter Change - Constant added to the Function

Enter the following into the Y= screen on your calculator and graph. Use Zoom 6 or Zoom 4 to see the functions. Describe how Y2 is different from Y1.

Notice that  $x^2$  is the same as  $x^2$ ,  $\sqrt{x}$  is the same as  $\sqrt{x}$ ,  $\text{abs}(x)$  means  $|x|$ , and  $\log(x)$  is the same as  $\log x$ .

	Y1	Y2	How did the graph change?
1.	$Y1 = x^2$	$Y2 = x^2 + 2$	
2.	$Y1 = x^3$	$Y2 = x^3 + 5$	
3.	$Y1 = \sqrt{x}$	$Y2 = \sqrt{x} + 4$	
4.	$Y1 = x^4$	$Y2 = x^4 + 3$	
5.	$Y1 = x^5$	$Y2 = x^5 + 6$	
6.	$Y1 = x^2$	$Y2 = x^2 - 7$	
7.	$Y1 = \sqrt{x}$	$Y2 = \sqrt{x} - 3$	
8.	$Y1 = \text{abs}(x)$	$Y2 =  x  - 5$	
9.	$Y1 = x^3$	$Y2 = x^3 - 6$	
10.	$Y1 = \log(x)$	$Y2 = \log x - 2$	

What effect does a number added to the parent function have on the graph? \_\_\_\_\_

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What effect does a number subtracted from the parent function have on the graph? \_\_\_\_\_

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