Transformations Unit Transformations Test Review

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

**Part 1:** Write an equation to match each graphical representation

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Graph** | | **Equation** | | |
| 1. | |  | | |
| 2. | |  | | |
| 3. | |  | | |
|  |  | |  |
|  |  | |  |
|  |  | |  |

**Part 2:** On this page, use the given function notation to sketch a graph, and also describe the transformation. Be sure to include the name of the parent function in the description. State the domain and range of each.

**Part 3:** Use the given description to graph the transformation, and also write the function using *f(x)* notation. State the domain and range of each.

|  |  |  |
| --- | --- | --- |
| **Description** | **Graph** | **Function Notation** |
| 1. Square root function with a horizontal shift right 3 units, and reflected over the y-axis. |  |  |
| 1. Quadratic function with a horizontal shift left 1 unit, and a vertical shift down 2 units. |  |  |
| 1. Linear function with a vertical shift up 1 unit. |  |  |
| 1. Cubic function with a horizontal shift left 3 units, and a vertical shift up 1 unit. |  |  |
| 1. Absolute value function with a horizontal shift left 4 units, vertical shift down 4 units, and reflecting over the x-axis. |  |  |

**Part 4:** Use the given function notation to write a description of transformations. Be sure to include the name of the parent function graph in your description. (Hint: Isolate y first!)

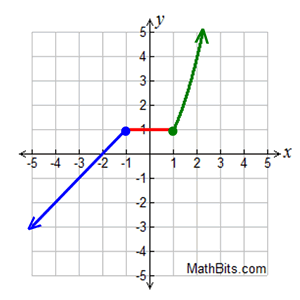
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**[](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjstu-b8uvJAhVGJx4KHVPXDIwQjRwIBw&url=http://mathbitsnotebook.com/Algebra1/FunctionGraphs/FNGTypePiecewise.html&psig=AFQjCNHTSb_9tjeRYC4nakqPKuKDcKZqTQ&ust=1450750759087944)Part 5:** Transform the following parent function according

to each equation below. (Hint: Before beginning the

transformations, pick out the important points from the

parent function that you will be using in each of the

graphs below.)

|  |  |
| --- | --- |
| 1. f(x) + 3   [http://www.mathnstuff.com/gif/5x5plan.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjZ8uLa9evJAhXDJR4KHeivDYwQjRwIBw&url=http://www.mathnstuff.com/papers/planes.htm&psig=AFQjCNFs6iYvknLnilmj-sDuEL-T7MktAg&ust=1450751787889706) | 1. [http://www.mathnstuff.com/gif/5x5plan.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjZ8uLa9evJAhXDJR4KHeivDYwQjRwIBw&url=http://www.mathnstuff.com/papers/planes.htm&psig=AFQjCNFs6iYvknLnilmj-sDuEL-T7MktAg&ust=1450751787889706)–f(x) |
| 1. f(x - 2)   [http://www.mathnstuff.com/gif/5x5plan.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjZ8uLa9evJAhXDJR4KHeivDYwQjRwIBw&url=http://www.mathnstuff.com/papers/planes.htm&psig=AFQjCNFs6iYvknLnilmj-sDuEL-T7MktAg&ust=1450751787889706) | 1. [http://www.mathnstuff.com/gif/5x5plan.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjZ8uLa9evJAhXDJR4KHeivDYwQjRwIBw&url=http://www.mathnstuff.com/papers/planes.htm&psig=AFQjCNFs6iYvknLnilmj-sDuEL-T7MktAg&ust=1450751787889706)f(x – 3)+2 |
| 1. f(-x) + 3   [http://www.mathnstuff.com/gif/5x5plan.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjZ8uLa9evJAhXDJR4KHeivDYwQjRwIBw&url=http://www.mathnstuff.com/papers/planes.htm&psig=AFQjCNFs6iYvknLnilmj-sDuEL-T7MktAg&ust=1450751787889706) | 1. [http://www.mathnstuff.com/gif/5x5plan.gif](http://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjZ8uLa9evJAhXDJR4KHeivDYwQjRwIBw&url=http://www.mathnstuff.com/papers/planes.htm&psig=AFQjCNFs6iYvknLnilmj-sDuEL-T7MktAg&ust=1450751787889706)- f(x) – 4 |

**Part 6:** Determine algebraically if each of the following functions are even, odd, or neither.

**Part 6:** Determine if each graph is even, odd, or neither. Support your choice with a brief explanation of the graph’s symmetry.

2.

1.

