Algebra I Journal F.IF.C.7: Graphing Absolute Value Functions www.jmap.org

NAME:_____

1. Graph the equations y = x and y = |x|. Give as many similarities and differences about these two graphs as you can.

2. Graph the equations $y = x^2$ and y = |x|. Give as many similarities and differences about these two graphs as you can.

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Similarities: Both go through the origin, both have one side of the graph in the first quadrant, both have the same steepness for the part in the first quadrant. Differences: y = x is in the first and the third quadrants, y = |x| is in the first and the second quadrants. y = x goes below the x-axis, y = |x| does not. [1] y = x is a straight line, y = |x| is two line segments.



Similarities: Both do not go below the *x*-axis, both go through the origin, both are in the first and second quadrants. Differences: $y = x^2$ is more curved and steeper than y = |x|.