Open the transformationsverticalhorizontalshift.tns file.

Problem 2: Move the slider d. Describe the movement of the function: $f(x) = (x)^2 + d$ and sketch an example of the graph.

      a.   Describe what is happening when d > 0.   b. Describe what is happening when d <0.

Problem 3: Move the slider c. Describe the movement of the function: $f(x) = (x - c)^2$ and sketch an example of the graph.

      a.   Describe what is happening when c > 0.   b. Describe what is happening when c <0.

Problem 4: Move both sliders. Can the graph be moved into all four quadrants? In each space provided, record an example of the equation that fits for the quadrant.
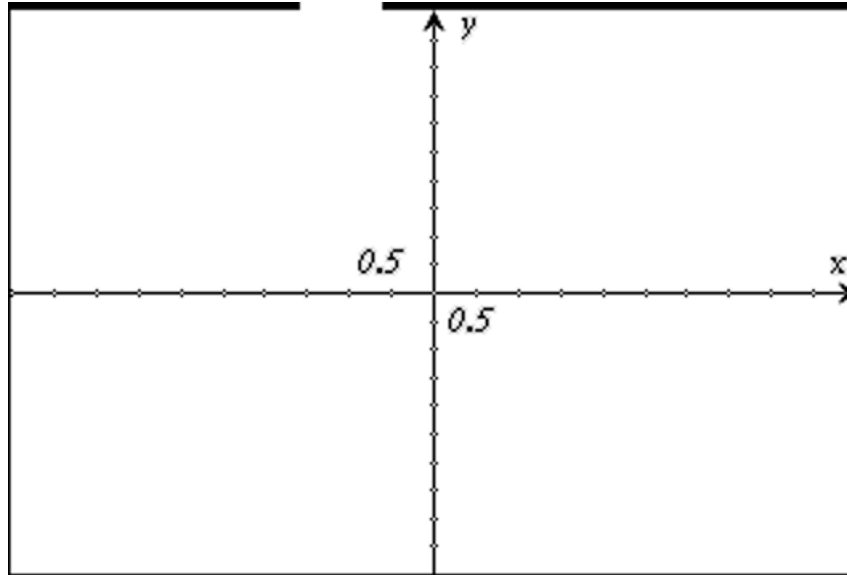
Quadrant 1: _____

Quadrant 2: _____

Quadrant 3: _____

Quadrant 4: _____

Problem 5:

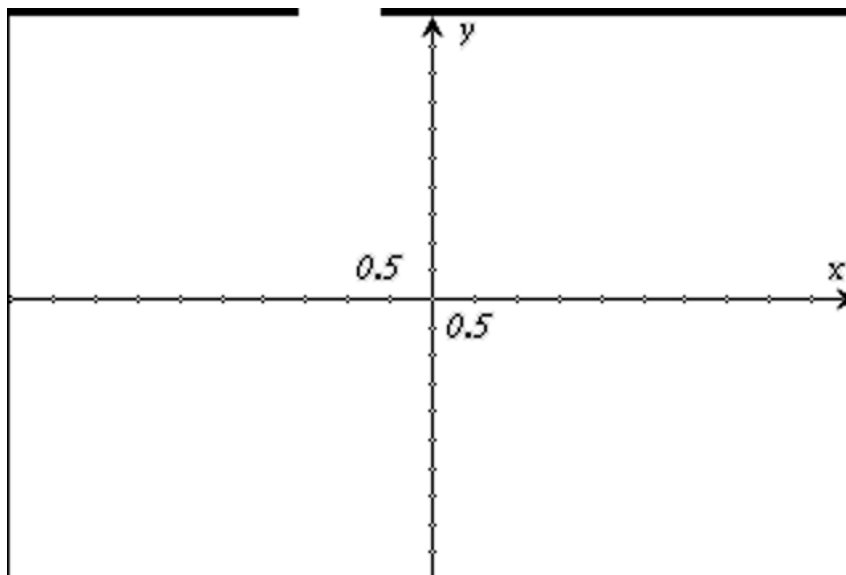Move only 1 slider at a time. Describe the movement of the function: $f(x) = |x - c| + d$

Sketch the graph of $f(x) = |x - 2.4| - 3.9$

0.5

0.5

Problem 6:

Move only 1 slider at a time. Describe the movement of the function: $f(x) = (x - c)^3 + d$

Sketch the graph of $f(x) = (x + 4.1)^3 + .8$

0.5

0.5

Problem 7:

Move only 1 slider at a time. Describe the movement of the function: $f(x) = \sqrt{x-c} + d$

Sketch the graph of $f(x) = \sqrt{x-1.5} - 2$