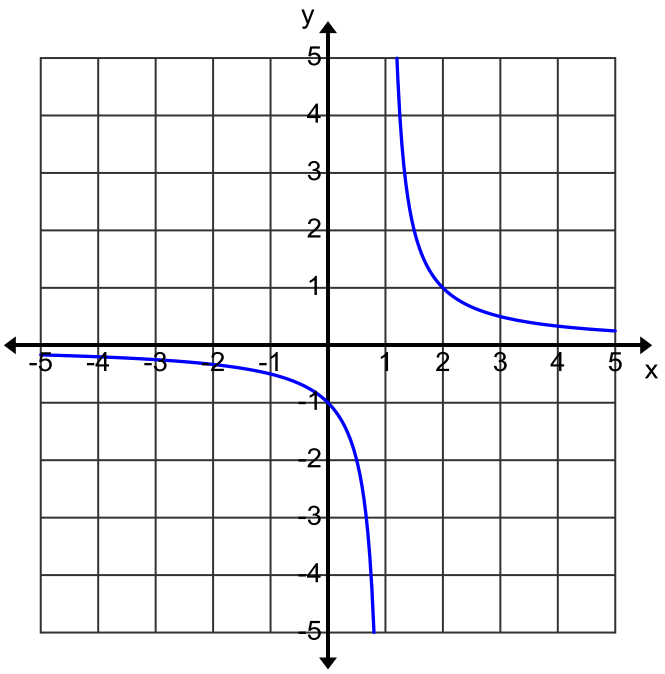
Assignment: Positive and Negative Parts and Increasing and Decreasing Intervals

Part I: Analyzing a Graph

For each graph below, identify any interval(s) where the rational function is a) positive, b) negative, c) increasing, and/or d) decreasing. Use inequality signs where appropriate, and write "none" if any of the characteristics do not apply.

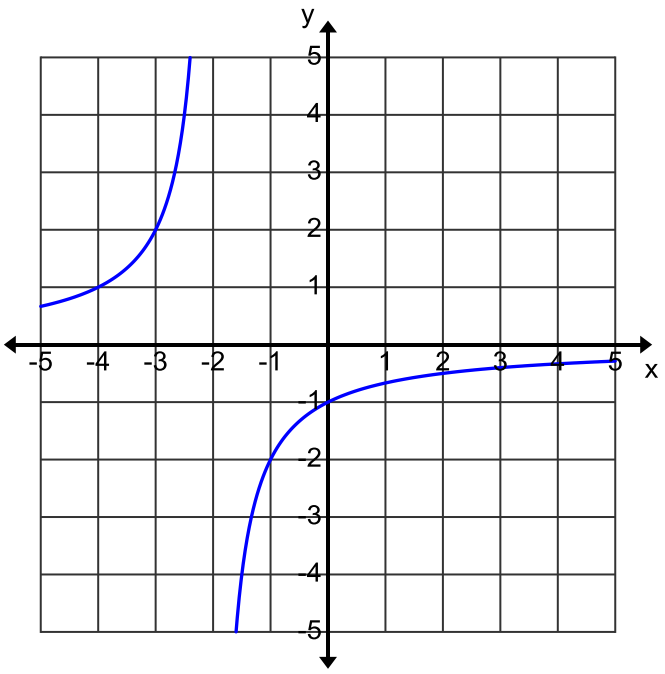
1.



a) positive: _____ b) negative: _____

c) increasing: _____ d) decreasing: _____

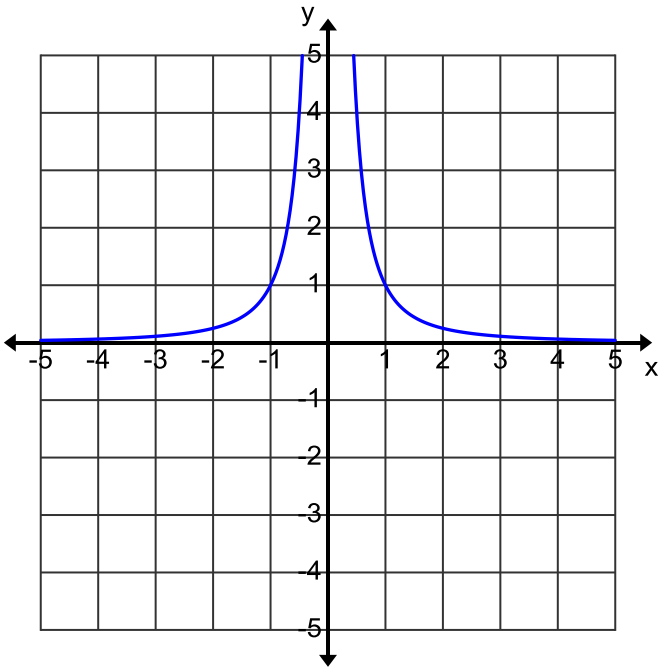
2.



a) positive: _____ b) negative: _____

c) increasing: _____ d) decreasing: _____

3.



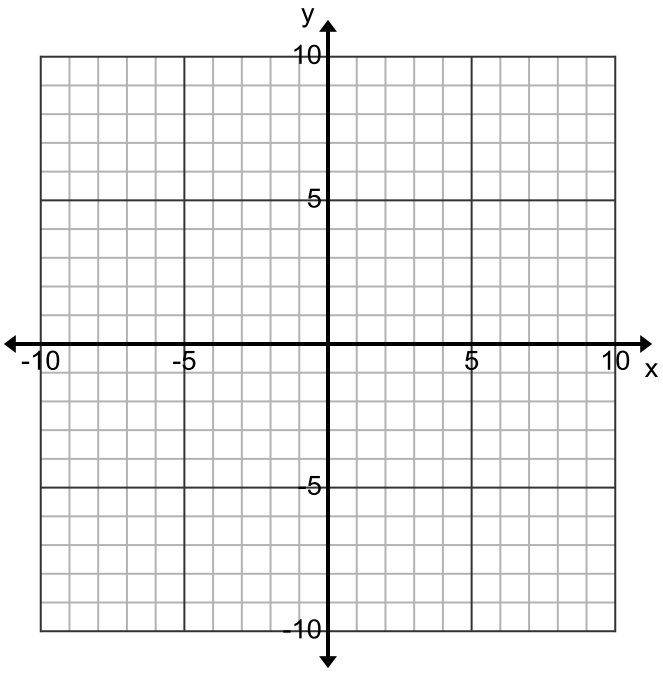
a) positive: _____ b) negative: _____

c) increasing: _____ d) decreasing: _____

Part II: Draw Your Own Graph

Follow the directions to draw the graph of a function that meets the description.

4. Draw the graph of a rational function that is positive for $x < 2$ and negative for $x > 2$ on the coordinate plane below.



5. Draw the graph of a rational function that is increasing for $x < -4$ and decreasing for $x > -4$ on the coordinate plane below.