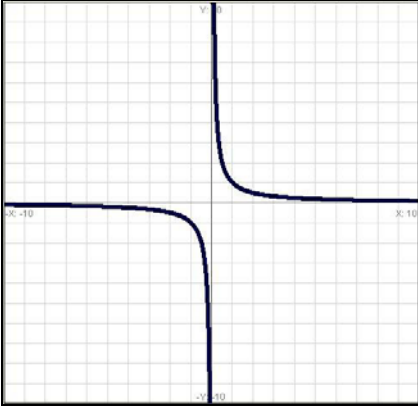
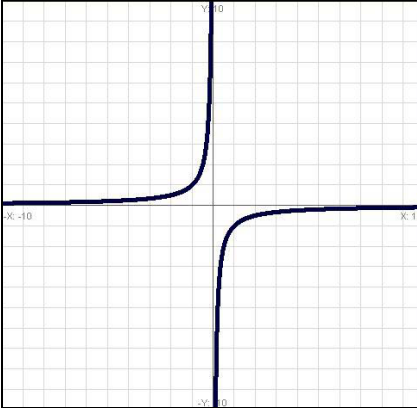
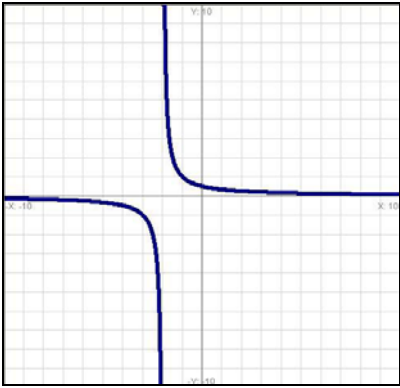
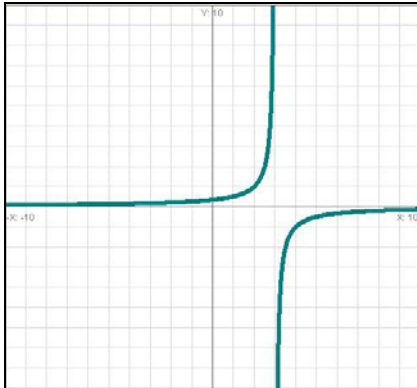


## A Selection of Reciprocal Functions

### Discussion of Reciprocal Functions & Practice Graphing Reciprocal Functions

- @ Review discussion of Reciprocal Function & Investigate Characteristics below! @  
 @ What can you conclude about characteristics from discussion and sample graphs? @

<b><math>y</math> or <math>f(x) = 1/x</math> * <math>-10 &lt; x \&amp; y &lt; +10</math></b> Note appearance of standard! Determine Asymptote! $Y = \infty$	<b>Verify GC by Table!</b>	<b><math>y</math> or <math>f(x) = -1/(x)</math> * <math>-10 &lt; x \&amp; y &lt; +10</math></b> Note appearance of (-) standard! Determine Asymptote! $Y = \infty$																								
	<table style="margin: auto;"> <tr><td><b>X</b></td><td><b>Y</b></td></tr> <tr><td>0</td><td><math>\infty</math></td></tr> <tr><td>+1</td><td>+1</td></tr> <tr><td>+5</td><td>+1/5</td></tr> <tr><td>-1</td><td>-1</td></tr> <tr><td>-5</td><td>-1/5</td></tr> <tr><td><b>X</b></td><td><b>Y</b></td></tr> <tr><td>0</td><td><math>\infty</math></td></tr> <tr><td>+1</td><td>-1</td></tr> <tr><td>+5</td><td>-1/5</td></tr> <tr><td>-1</td><td>+1</td></tr> <tr><td>-5</td><td>+1/5</td></tr> </table>	<b>X</b>	<b>Y</b>	0	$\infty$	+1	+1	+5	+1/5	-1	-1	-5	-1/5	<b>X</b>	<b>Y</b>	0	$\infty$	+1	-1	+5	-1/5	-1	+1	-5	+1/5	
<b>X</b>	<b>Y</b>																									
0	$\infty$																									
+1	+1																									
+5	+1/5																									
-1	-1																									
-5	-1/5																									
<b>X</b>	<b>Y</b>																									
0	$\infty$																									
+1	-1																									
+5	-1/5																									
-1	+1																									
-5	+1/5																									

<b><math>f(x) = 1/(x+2)</math> * <math>-10 &lt; x \&amp; y &lt; +10</math></b> How does (+) affect Graph? Determine Asymptote! $Y = \infty$	<b>Verify GC by Table!</b>	<b><math>f(x) = -1/(x-3)</math> * <math>-10 &lt; x \&amp; y &lt; +10</math></b> How does (-) affect Graph? Determine Asymptote! $Y = \infty$																								
	<table style="margin: auto;"> <tr><td><b>X</b></td><td><b>Y</b></td></tr> <tr><td>-2</td><td><math>\infty</math></td></tr> <tr><td>-1</td><td>+1</td></tr> <tr><td>+3</td><td>+1/5</td></tr> <tr><td>-3</td><td>-1</td></tr> <tr><td>-7</td><td>-1/5</td></tr> <tr><td><b>X</b></td><td><b>Y</b></td></tr> <tr><td>+3</td><td><math>\infty</math></td></tr> <tr><td>+2</td><td>+1</td></tr> <tr><td>+8</td><td>-1/5</td></tr> <tr><td>+4</td><td>-1</td></tr> <tr><td>-2</td><td>+1/5</td></tr> </table>	<b>X</b>	<b>Y</b>	-2	$\infty$	-1	+1	+3	+1/5	-3	-1	-7	-1/5	<b>X</b>	<b>Y</b>	+3	$\infty$	+2	+1	+8	-1/5	+4	-1	-2	+1/5	
<b>X</b>	<b>Y</b>																									
-2	$\infty$																									
-1	+1																									
+3	+1/5																									
-3	-1																									
-7	-1/5																									
<b>X</b>	<b>Y</b>																									
+3	$\infty$																									
+2	+1																									
+8	-1/5																									
+4	-1																									
-2	+1/5																									

What affect would a ( $\pm$ ) number outside the ( ) have on the Graph?  
 The General Equation for Reciprocal Functions?  $y = (\pm A / Bx \pm C) \pm D$   
 What if the numerator is something other than (1) or possibility a Polynomial?