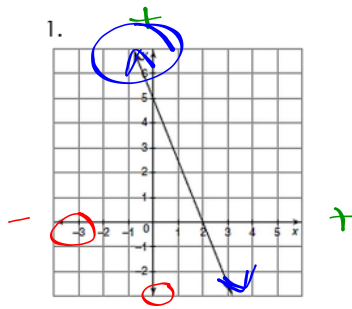
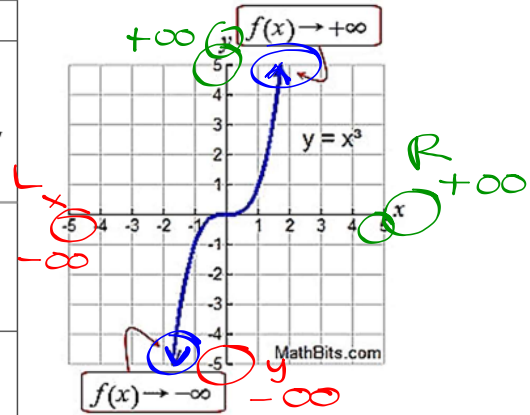
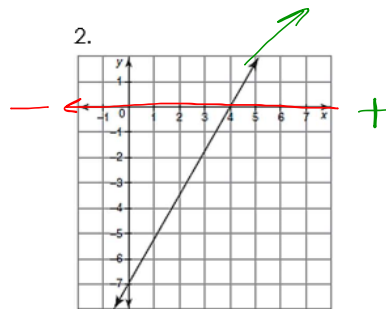


End Behavior

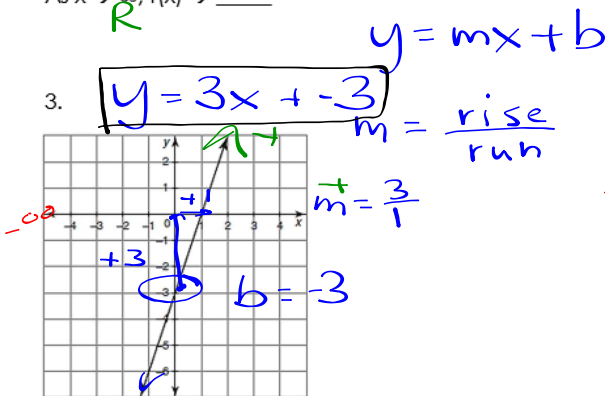
End Behavior	
<p>Define: Behavior of the ends of the function (what happens to the y-values or $f(x)$) as x approaches positive or negative infinity. The arrows indicate the function goes on forever so we want to know where those ends go.</p>	
<p>Think: As x goes to the left (negative infinity), what direction does the left arrow go?</p>	<p>Write: As $x \rightarrow -\infty, f(x) \rightarrow -\infty$</p>
<p>Think: As x goes to the right (positive infinity), what direction does the right arrow go?</p>	<p>Write: As $x \rightarrow \infty, f(x) \rightarrow +\infty$</p>



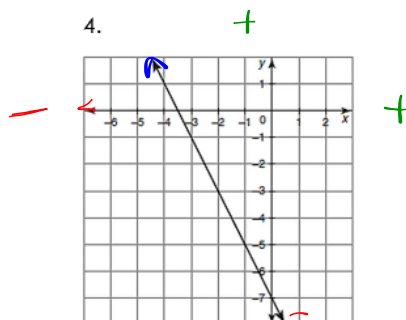
As $x \rightarrow -\infty, f(x) \rightarrow +\infty$
 As $x \rightarrow \infty, f(x) \rightarrow -\infty$



As $x \rightarrow -\infty, f(x) \rightarrow -\infty$
 As $x \rightarrow \infty, f(x) \rightarrow +\infty$







As $x \rightarrow -\infty, f(x) \rightarrow -\infty$
 As $x \rightarrow \infty, f(x) \rightarrow +\infty$



As $x \rightarrow -\infty, f(x) \rightarrow +\infty$
 As $x \rightarrow \infty, f(x) \rightarrow -\infty$

Practice

Practice Example 1	Practice Example 2
<p>Domain: \mathbb{R}</p> <p>Range: \mathbb{R}</p>	<p>Domain: \mathbb{R}</p> <p>Range: \mathbb{R}</p>
<p>Cross y-axis Y-intercept: $(0, 2)$</p> <p>Cross x-axis X-intercept: $(-4, 0)$</p> <p>Zero: $x = -4$</p>	<p>Y-intercept: $(0, 4)$</p> <p>X-intercept: $(6, 0)$</p> <p>Zero: $x = 6$</p>
<p>Interval of Increase: \mathbb{R}</p> <p>Interval of Decrease: none</p> <p>Interval of Constant: none</p>	<p>Interval of Increase: none</p> <p>Interval of Decrease: \mathbb{R}</p> <p>Interval of Constant: none</p>
<p>*CHANGE IN DIRECTION?*</p>	
<p>Maximum: none</p> <p>Minimum: none</p>	<p>Maximum: none</p> <p>Minimum: none</p>
<p>Positive: </p> <p>Negative: </p>	<p>Positive: </p> <p>Negative: </p>
<p>End Behavior: $-\infty$</p> <p>As $x \rightarrow -\infty, f(x) \rightarrow$ _____</p> <p>As $x \rightarrow \infty, f(x) \rightarrow +\infty$</p>	<p>End Behavior: $+\infty$</p> <p>As $x \rightarrow -\infty, f(x) \rightarrow$ _____</p> <p>As $x \rightarrow \infty, f(x) \rightarrow -\infty$</p>