

Notecards Limits

1	What are the 3 ways you can evaluate a limit?	<ol style="list-style-type: none"> <li>1. Graphically</li> <li>2. Numerically or (Make a table)</li> <li>3. Algebraically</li> </ol>
2	What is a limit?	$\lim_{x \rightarrow c} f(x) = L$ <p>The limit as <math>x</math> approaches <math>c</math> of <math>f(x)</math> is equal to <math>L</math></p> <p>The Limit (<math>L</math>) is the graph behavior (the <math>y</math> –value) at a specific <math>x</math>.</p>
3	What are the 3 conditions that must be met for a function to be continuous at $x = c$ ?	<ol style="list-style-type: none"> <li>1. <math>f(a)</math> must be defined Must be defined at <math>a</math>.</li> <li>2. <math>\lim_{x \rightarrow a} f(x)</math> must exist The limit must exist at <math>a</math>.</li> <li>3. <math>\lim_{x \rightarrow a} f(x) = f(a)</math> The limit must equal the function value.</li> </ol>
4	What is the Calculus way to state a vertical asymptote at $x = a$ ?	<p>If</p> $\lim_{x \rightarrow a} f(x) = \pm\infty$ <p>Then</p> <p>VA: <math>x = a</math></p>
5	What is the Calculus way to state a horizontal asymptote at $y = a$ ?	<p>If</p> $\lim_{x \rightarrow \pm\infty} f(x) = a$ <p>Then</p> <p>HA: <math>y = a</math></p>