

Example 1

Evaluate each limit using the given table of values.

x	1.9	1.99	1.999	2	2.001	2.01	2.1
$f(x)$	5.25	5.48	5.499	?	5.501	5.52	5.75

$$\lim_{x \rightarrow 2^-} f(x) =$$

$$\lim_{x \rightarrow 2^+} f(x) =$$

$$\lim_{x \rightarrow 2} f(x) =$$

t	-3.1	-3.01	-3.001	-3	-2.999	-2.99	-2.9
$h(t)$	9.11	9.05	9.002	?	2.499	2.49	2.3

$$\lim_{t \rightarrow -3^-} h(t) =$$

$$\lim_{t \rightarrow -3^+} h(t) =$$

$$\lim_{t \rightarrow -3} h(t) =$$

θ	-0.1	-0.01	-0.001	0	0.001	0.01	0.1
$a(\theta)$	2.9	17.6	123.51	?	12	12	12

$$\lim_{\theta \rightarrow 0^-} a(\theta) =$$

$$\lim_{\theta \rightarrow 0^+} a(\theta) =$$

$$\lim_{\theta \rightarrow 0} a(\theta) =$$

y	0.9	0.99	0.999	1	1.001	1.01	1.1
$g(y)$	-2	-2.4	-2.95	?	4.6	-2.1	3.8

$$\lim_{y \rightarrow 1^-} g(y) =$$

$$\lim_{y \rightarrow 1^+} g(y) =$$

$$\lim_{y \rightarrow 1} g(y) =$$

Example 2

Suppose $f(x) = \frac{\sin x}{x}$. Find the limit of $f(x)$ as $x \rightarrow 0$.

Example 3

For each graph shown, determine if the limit as $x \rightarrow 1$ exists. Explain your reasoning.

