

Limits and Discontinuity

For which of the following should one use a one-sided limit? In each case, evaluate the one- or two-sided limit.

1. $\lim_{x \rightarrow 0} \sqrt{x}$

2. $\lim_{x \rightarrow -1} \frac{1}{x+1}$

3. $\lim_{x \rightarrow 1} \frac{1}{(x-1)^4}$

4. $\lim_{x \rightarrow 0} |\sin x|$

5. $\lim_{x \rightarrow 0} \frac{|x|}{x}$

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