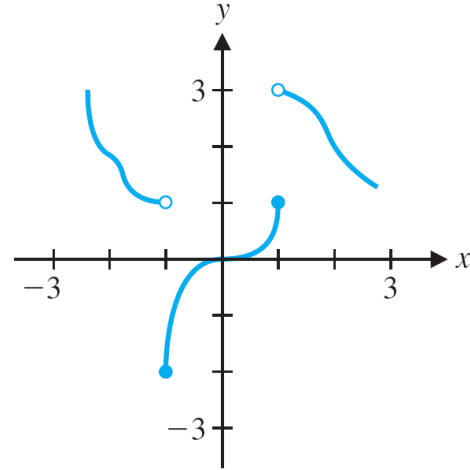


Quiz 4
Oct. 25, 2006

1. (10 pts) Identify the limits from the graph of $f(x)$

$$\begin{aligned}\lim_{x \rightarrow -1^-} f(x) &= 1, \\ \lim_{x \rightarrow -1^+} f(x) &= -2, \\ \lim_{x \rightarrow -1} f(x) &= \text{DNE}, \\ \lim_{x \rightarrow 0^-} f(x) &= 0, \\ \lim_{x \rightarrow 1^-} f(x) &= 1.\end{aligned}$$



2. (10 pts) Evaluate the indicated limit, if it exists.

$$\begin{aligned}& \lim_{x \rightarrow 4} \frac{\sqrt{x}-2}{x-4} \\ &= \lim_{x \rightarrow 4} \frac{\sqrt{x}-2}{x-4} \cdot \frac{\sqrt{x}+2}{\sqrt{x}+2} \\ &= \lim_{x \rightarrow 4} \frac{x-4}{(x-4)(\sqrt{x}+2)} \\ &= \lim_{x \rightarrow 4} \frac{1}{\sqrt{x}+2} \\ &= \frac{1}{4}\end{aligned}$$