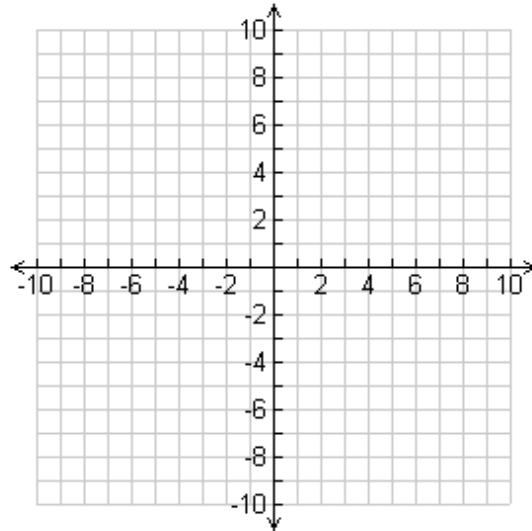


1. **(A)** Sketch the following function and determine $\lim_{x \rightarrow 3} f(x)$.

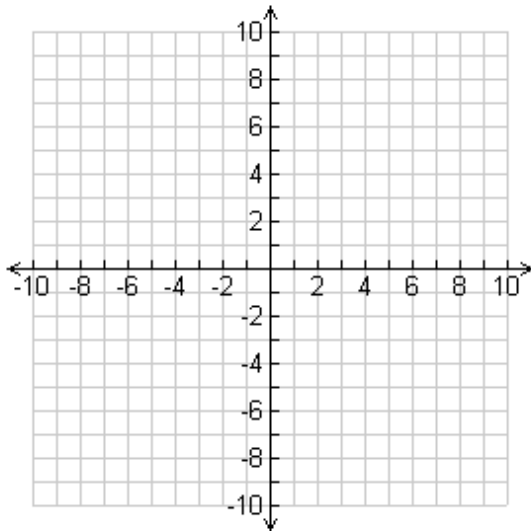
$$f(x) = \begin{cases} x; & x \leq -4 \\ 5; & -4 < x < 3 \\ x^2 - 4; & x \geq 3 \end{cases}$$

(b) Is the function continuous at $x = -4$? If not, state which conditions of continuity are not met.



2. Sketch the following function

$$f(x) = \begin{cases} 2 - x; & x < -1 \\ x; & -1 \leq x < 1 \\ (x - 1)^2; & x \geq 1 \end{cases}$$



And determine each of the following.

a) $\lim_{x \rightarrow -1^-} f(x) =$	b) $\lim_{x \rightarrow -1} f(x) =$
c) $\lim_{x \rightarrow -1^+} f(x) =$	d) $\lim_{x \rightarrow 0} f(x) =$
e) $\lim_{x \rightarrow 1^-} f(x) =$	f) $\lim_{x \rightarrow 1} f(x) =$
g) $\lim_{x \rightarrow 1^+} f(x) =$	h) $f(0) =$