Matching

A. $f(x) = \dfrac{x^2 - 2x - 3}{x + 1}$

B. $f(x) = \begin{cases} 2x - 1, & x < 0 \\ x^2 + x - 1, & x > 0 \\ 2, & x = 0 \end{cases}$

C. $f(x) = \dfrac{|x + 1|}{x + 1}$

D. $f(x) = \dfrac{x^2 - x - 2}{x^2 + 2x + 1}$

E. $f(x) = \begin{cases} \dfrac{\sin x}{x} & x \neq 0 \\ 1 & x = 0 \end{cases}$

F. $f(x) = \begin{cases} e^x & x < 0 \\ \ln|x + 1| & x > 0 \end{cases}$

G. $f(x) = \dfrac{x^2 + 2x - 8}{x - 2}$

H. $f(x) = \dfrac{x^2 - x - 2}{x^2 - 4x + 4}$

I. $f(x) = \begin{cases} x^2 & x < 2 \\ x & x \geq 2 \end{cases}$

(1). $\lim_{x \to 0} f(x) = -1$ and $f(x)$ is not continuous at $x = 0$ (2). The limit of $f(x)$ as x approaches -1 does not exist due unbounded behavior.

(3). $\lim_{x \to -1} f(x) = -4$ (4). $\lim_{x \to -1^-} f(x)$ exists and $\lim_{x \to -1} f(x)$ does not exist (5). $\lim_{x \to 0} f(x)$ does not exist (6). $f(2)$ is defined (7). $f(x)$ has a removable discontinuity at $x = 2$ (8). $f(x)$ has a vertical asymptote at $x = 2$ (9). $f(x)$ is continuous at $x = 0$