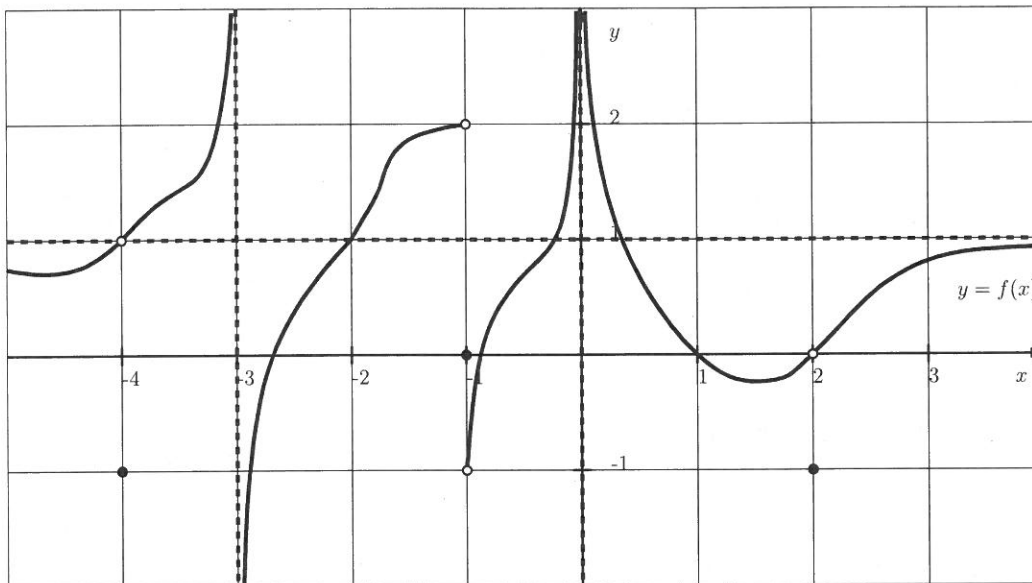


Name: Solution	A#:	Section: I
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[6] 1. Let f be a function whose graph of $y = f(x)$ is given below.



Then

(a) $\lim_{z \rightarrow -4^-} f(z) = \underline{1}$

(b) $\lim_{s \rightarrow -3^+} f(s) = \underline{-\infty}$

(c) $\lim_{z \rightarrow -1^-} f(z) = \underline{2}$

(d) List all numbers a for which $\lim_{s \rightarrow a} f(s)$ does not exist: $-3, -1, 0$

(e) List all horizontal asymptotes: $y = 1$

(f) List all vertical asymptotes: $x = -3, x = 0$

[2] 2. List all vertical asymptotes of $y = \frac{(x-1)^3(x-3)^2 \ln|x+1|}{(x+3)^2(x-1)^2(x-3)^3}$: $-3, 3, -1$

