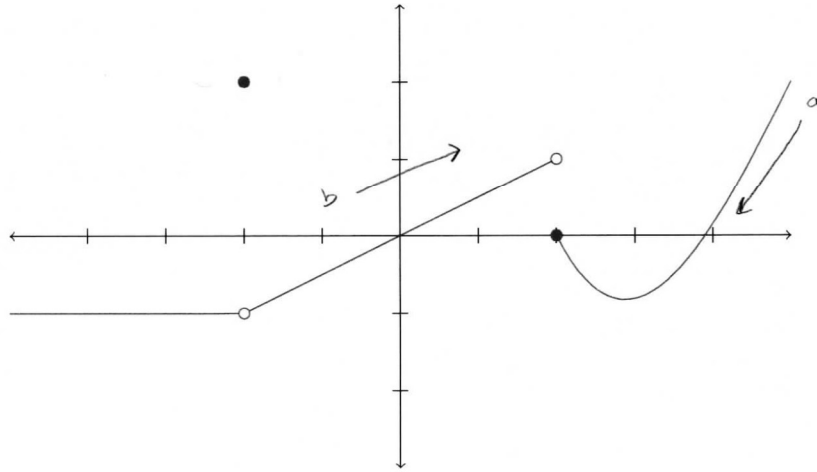


Each question is worth 5 points. Give good justification for full credit.



1. (a) What is  $\lim_{x \rightarrow 2^+} f(x)$ ? 0

(b) What is  $\lim_{x \rightarrow 2^-} f(x)$ ? 1

*Great*

(c) What is  $\lim_{x \rightarrow 2} f(x)$ ? DNE; there are 2 different limits, therefore 1 single limit Does Not Exist

(d) What is  $\lim_{x \rightarrow -2^+} f(x)$ ? -1

(e) What is  $\lim_{x \rightarrow -2^-} f(x)$ ? -1

2. Evaluate the limit  $\lim_{x \rightarrow 5} \frac{x^2 - 6x + 5}{x - 5}$ .

$$\lim_{x \rightarrow 5} \frac{x^2 - 6x + 5}{x - 5} = \lim_{x \rightarrow 5} \frac{(x-5)(x-1)}{x-5} = \lim_{x \rightarrow 5} x-1 = \lim_{x \rightarrow 5} 5-1 = \boxed{4}$$

*Excellent!*

$$\begin{aligned} x^2 - 5x - x + 5 \\ x^2 - 6x + 5 \end{aligned}$$