

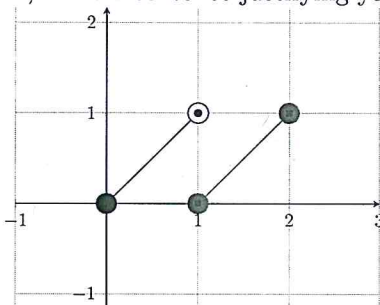
Name:

Key

Date: 06 February 2020

Quiz 2: You must show all work to receive credit. Calculators are prohibited.

- (1) (§2.1, #15, 10 points) For this problem, consider the graph below of $f(x)$ and calculate the requested values. For each part, write a sentence justifying your answer.



- (a)
- $f(1)$

$$f(1) = 0 \text{ (filled in value)}$$

$$(b) \lim_{x \rightarrow 1^-} f(x) = 1 \text{ (coming from L)}$$

$$(c) \lim_{x \rightarrow 1^+} f(x) = 0 \text{ (" " R)}$$

$$(d) \lim_{x \rightarrow 1} f(x) = \text{DNE (One-sided limits disagree)}$$

- (2) (§2.3, #34, 10 points) Calculate the value for the below or limit or explain why it does not exist.

$$\lim_{x \rightarrow 3} \frac{x^2 - 2x - 3}{x - 3} = \lim_{x \rightarrow 3} \frac{(x-3)(x+1)}{x-3}$$

$$= \lim_{x \rightarrow 3} x+1$$

$$= 3+1$$

$$= 4$$