

Math 131 - Quiz 2

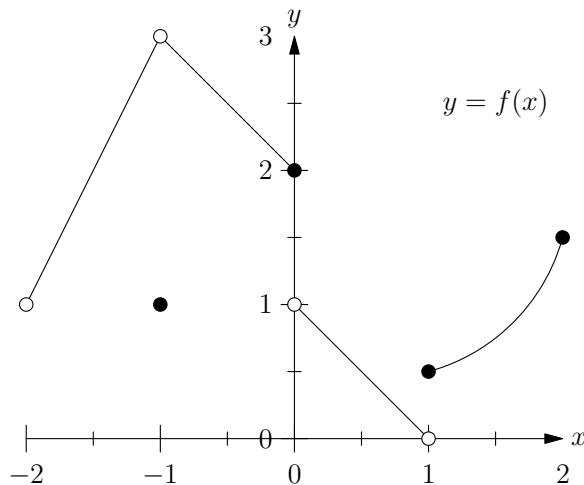
August 31, 2023

Name _____

Score _____

Show all work to receive full credit. Supply explanations when necessary.

1. (5 points) Referring to the graph shown below, determine each of the following or explain why it does not exist.



(a) $\lim_{x \rightarrow -1} f(x)$

(b) $\lim_{x \rightarrow -2} f(x)$

(c) $\lim_{x \rightarrow 1} f(x)$

(d) $\lim_{x \rightarrow 1/2} f(x)$

(e) $f(-1)$

Turn over.

2. (3 points) Suppose that $\lim_{x \rightarrow 2} f(x) = 3$ and $\lim_{x \rightarrow 2} g(x) = -7$. Find each limit. Show work or explain your reasoning.

(a) $\lim_{x \rightarrow 2} [4f(x) - 2g(x)]$

(b) $\lim_{x \rightarrow 2} \frac{x^2 f(x)}{g(x) - 7}$

3. (1 point) Evaluate the limit: $\lim_{x \rightarrow \pi/3} [6 \cos x]$

4. (1 point) Explain why direct substitution cannot be used to evaluate $\lim_{x \rightarrow \pi/2} \tan x$.