

Math 108-01
 Summer 2024
 Dr. Lily Yen

Quiz Three

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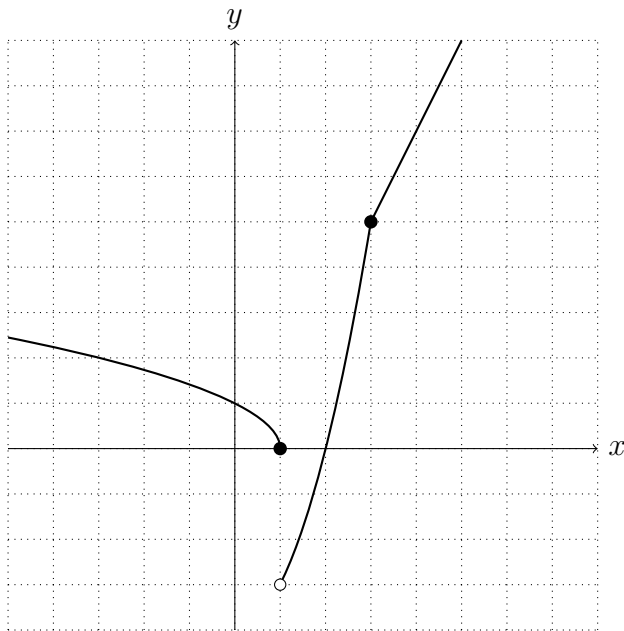
Name: _____
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 Score: ____/10

Problem 1: Suppose that the height above street level of a water balloon t seconds after it was thrown off Fir building's office is given by $s(t) = -4.9t^2 + 3t + 14$ metres. Use a permissible graphing calculator (TI83, TI83+, TI84-Plus) to make a table of values for the average velocity of the water balloon to estimate the instantaneous velocity of the water balloon **two** seconds after it was thrown. Clearly state your Y_1 and Y_2 from your graphing calculator. Provide at least 4 decimal places.

Interval	Y

Score: ____/4

Problem 2: Answer the following questions according to the graph of $y = f(x)$ as shown. Note one hollow dot at $(1, -3)$ and one solid dot at $(1, 0)$.



a. $f(1) =$

b. $\lim_{x \rightarrow 1^-} f(x) =$

c. $\lim_{x \rightarrow 1^+} f(x) =$

d. $\lim_{x \rightarrow 1} f(x) =$

e. $\lim_{x \rightarrow 4} \frac{f(x) - f(4)}{x - 4} =$

f. Estimate $\lim_{x \rightarrow -3} \frac{f(x) - 2}{x + 3} =$

Score: ____/6