# Quiz 3

Show all your work

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 $s(t) = -4.9t^2 + 2t + 13$ 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 **three** 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 $(-2, 1)$ and one solid dot at $(-2, -3)$.
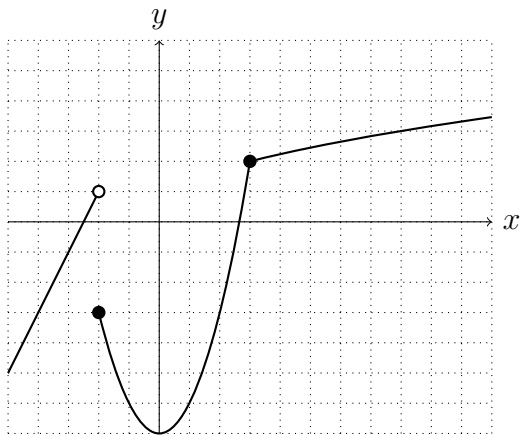
a. $f(-2) =$ ☐

b. $\lim\limits_{x \to -2^-} f(x) =$ ☐

c. $\lim\limits_{x \to -2^+} f(x) =$ ☐

d. $\lim\limits_{x \to -2} f(x) =$ ☐

e. $\lim\limits_{x \to -4} \dfrac{f(x) - f(-4)}{x + 4} =$ ☐

f. $\lim\limits_{x \to 0} \dfrac{f(x) + 7}{x} =$ ☐

Score: ___/6