

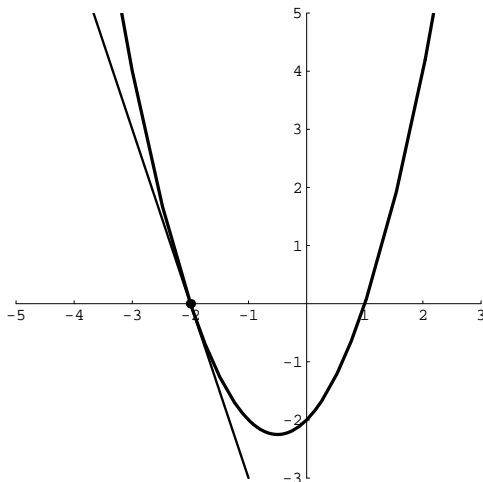
NAME: _____

Math 103L: Basic Derivative (Section 10.5)

These problems are a sample of the kinds of problems that may appear on the final exam. Some answers are included to indicate what is expected. Problems that require a summary statement are marked with Sum. The summary statements should be written in complete sentences and they should include the units of measurement for all quantities mentioned in the summary.

1. Let $f(x) = -x^2 + 12x + 1$.
 - (a) Find the derivative $f'(x)$.
 - (b) Find $f'(-1)$.

2. Let $f(x) = x^2 + x - 2$. Find the equation of the line tangent to the graph of $f(x)$ at the point $(-2, f(-2))$ shown below.



3. Let $f(x) = 2x^2 - 3x + 4$. Find the equation of the line tangent to the graph of $y = f(x)$ at the point $(0, f(0))$.