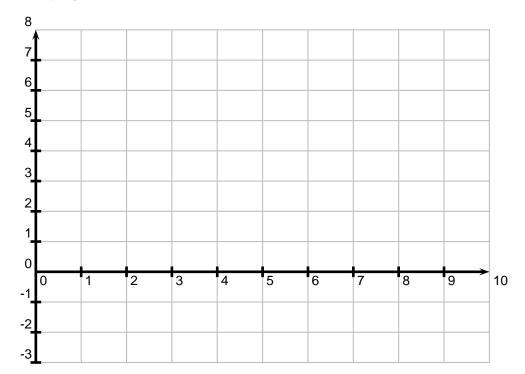
- 2. [8 points] On the axes provided below, sketch the graph of a function f, defined on the interval [0, 10], which satisfies **ALL** of the following properties. (Hint: the function f is not required to be continuous.)
 - f is invertible on the entire domain [0, 10].
 - f(0) = 3
 - $f^{-1}(5) = 2$
 - f'(x) > 0 for 0 < x < 5.
 - f''(x) > 0 for 0 < x < 2.
 - f'(x) is decreasing on the interval (2,5).
 - f'(x) = -2 for 5 < x < 6.
 - $\bullet \lim_{x \to 10^-} f(x) = -3.$



3. [6 points] Consider the function $f(x) = 13x\sin(x^2 + 1)$. Write down the limit definition of f'(2). (You do not need to estimate or compute the derivative.)