3. (12 points) Below is a graph of a function $f$:

(a) For which of the marked $x$ values is $f'(x)$ the largest? $x_6$

(b) List all of the marked $x$ values for which $f(x) > 0$. $x_1$

(c) List all of the marked $x$ values for which $f'(x) < 0$. $x_1, x_4, x_5$

(d) List all of the marked $x$ values for which $f'(x)$ is increasing. $x_1, x_2, x_5, x_6$

(e) List all of the marked $x$ values for which $f(x)$ is increasing. $x_2, x_6$

(f) List all of the marked $x$ values for which $f''(x)$ is negative. $x_4$