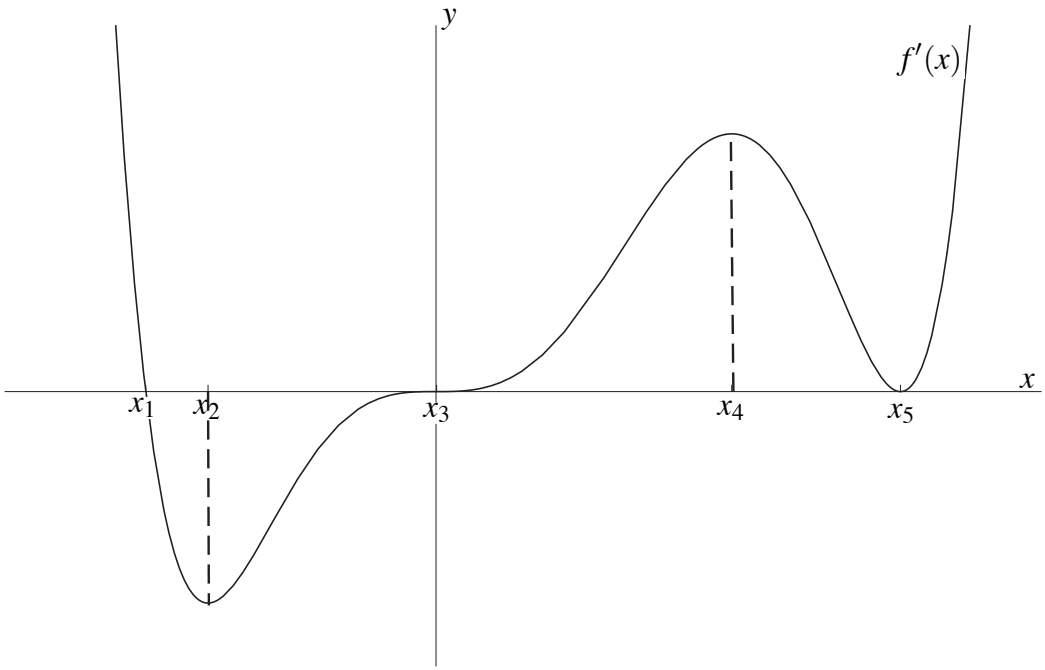
1. (12 points) The graph below is a plot of $f'(x)$ (the *derivative* of f). Use the graph to answer questions about the function f.



(a) What are the critical points of f? x_1, x_3, x_5

(b) For what value(s) of x does f have a local maximum? x_1

(c) For what value(s) of x does f have a local minimum? x_3

(d) What are the inflection points of f? x_2, x_4, x_5

(e) On what interval(s) is f concave up? $[x_2, x_4], [x_5, \infty)$

(f) If f is a polynomial, what is the minimal degree of f? 7