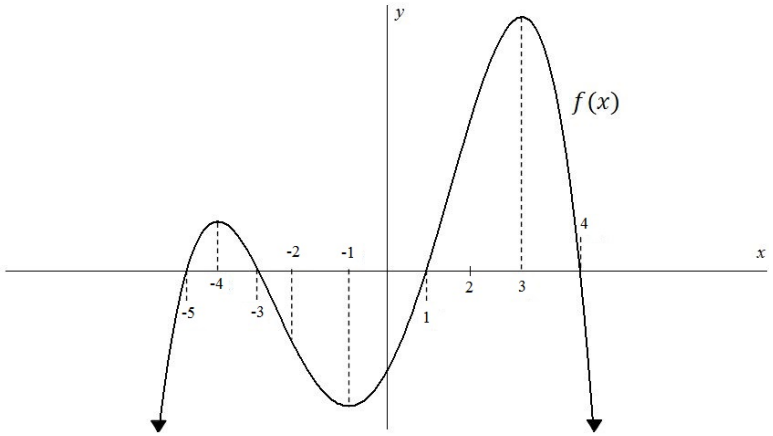
Name _____

Homework 11
Section 4.1

1. (5) Find the critical numbers of the function $f(x) = \dfrac{3x-3}{x^2-2x+17}$.

2. (2ea) Use the graph of $y = f(x)$ given below to answer the questions about the derivative function $f'(x)$



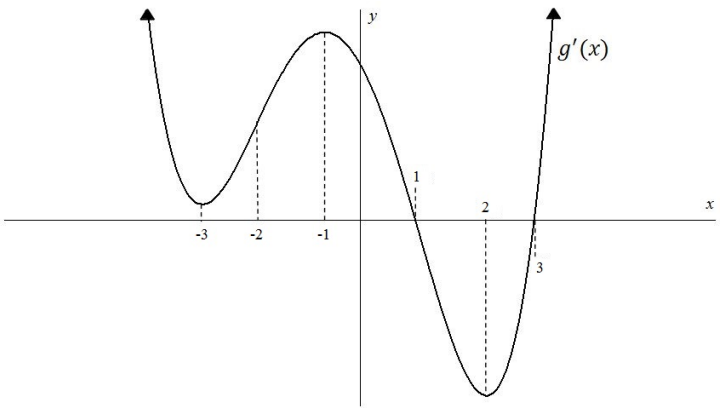
(a) On what interval(s) is $f'(x)$ positive?

(b) At which marked x-value(s) is $f'(x)$ changing from negative to positive?

(c) At which marked x-value(s) is $f'(x)$ zero?

(d) At which marked x-value(s) is $f'(x)$ the least?

3. (2ea) Use the graph of $\underline{g'(x)}$ given below to answer the questions below.



(a) What is/are the critical number(s) for $g(x)$?

(b) On what interval(s) is $g(x)$ decreasing?

(c) At which marked x-value(s) is $g(x)$ greatest?

(d) At which marked x-value(s) is $g(x)$ changing from decreasing to increasing?