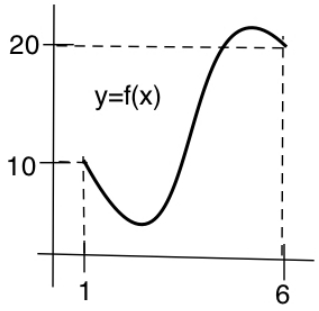
Math 151

Show Your Work! Nov.12, 2019 Name _____
Good Luck! Quiz #6 A (last one!) (please print)

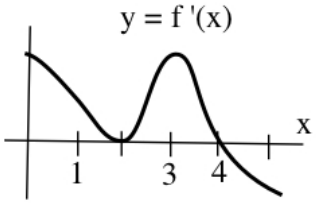
1. The graph of **y = f(x)** is shown.



(2) (a) According to the Mean Value Theorem, there is a value of c between 1 and 6 so that f '(c) = _____

(2) (b) On the graph label the location(s) of all of the c's that satisfy the Mean Value Theorem.

2. The graph of **y = f '(x)** is shown.



(a) At x = 2 f has a local MAX MIN NEITHER (circle one).

(4) (b) At x= 3 f has a local MAX MIN NEITHER (circle one).

(c) At x = 1 f is INCREASING DECREASING (circle one)

(d) Which is largest ? f(1) f(2) f(3) f(4) (circle one)

3. $g'(x) = 6x^2 + 2e^x - 3\sin(x) + 4$ and g(0) = 10. Then

g(x) = _____

(3)

4. $f'(x) = \frac{x-5}{x-2}$ on the interval $1 \le x \le 9$ has critical numbers at x = _____

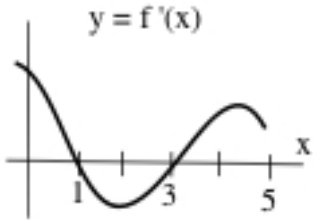
(2)

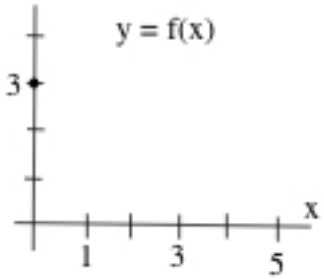
5. (a) If f '(x)=g '(x) for all x, then f(x) and g(x) _____ (fill in)

(3) (b) If g(2) is a global minimum of g, then g '(2)=0. True False (circle one)

(c) f '(x) < 0 for all x then the maximum of f on [2, 6] occurs at x = _____

6. The graph of y = f '(x) is shown and f(0)=3.





Sketch a good graph of the shape of f.

(3)

7. $g'(x) = (x-1)(x-3)^2$

(a) g(1) is a local Maximum Minimum Neither (circle one)

(2) (b) g(3) is a local Maximum Minimum Neither (circle one)

Bonus (+1 if correct) After age 30 what was Newton's job?