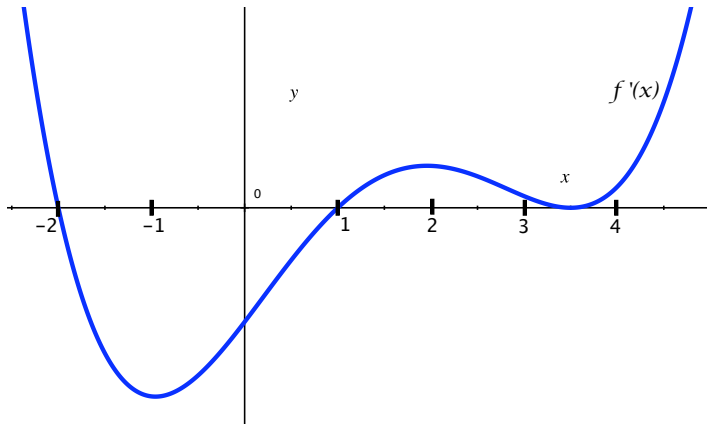


Math 151 Quiz #10  
December 1, 2009

Name: \_\_\_\_\_

Simplify your answers. Show all work on a separate paper stapled to this sheet. No calculators permitted.

1. (3 pts.) Find the critical numbers of  $f(x) = 5e^{\sin x} + 31$  on the interval  $[0, 2\pi]$ .
2. (4 pts.) Find the **absolute** maximum and minimum **values** of  $f(x) = \frac{4x}{x^2+4}$  on the domain  $[0, 6]$ .
3. The derivative function  $f'(x)$  is shown below.



- (a) (1 pts.) On what intervals is the function  $f(x)$  increasing?
- (b) (1 pts.) At what value(s) of  $x$  does  $f(x)$  have a local maximum?
- (c) (1 pts.) On what interval(s) is  $f(x)$  concave upward?