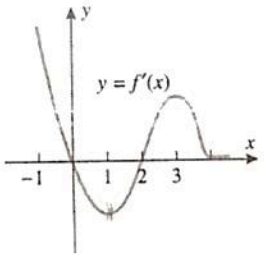
Name: _____ Date: _____

AP Calc AB: Second Derivative Test Homework Ms. Loughran

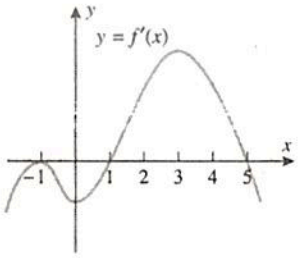
For 1 and 2, use the graphs of f' shown to estimate all values of x at which f has

(a) relative maxima
(b) relative minima
(c) inflection points

1.



2.



For 3 and 4, find the relative extrema using both the first and second derivative tests.

3. $f(x)=1-4x-x^2$

4. $f(x)=\sin^2 x, \qquad 0<x<2\pi$

For 5-8, use any method to find the relative extrema of the function f.

5. $f(x)=x^3+5x-2$

6. $f(x)=x(x-1)^2$

7. $f(x)=\dfrac{x^2}{x^2+1}$

8. $f(x)=\ln(1+x^2)$