

Name: _____

Date: _____

AP Calc AB: Testing for relative extrema and points of inflection

First Derivative Test

1.

2.

For 1-3, find all relative extrema.

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

2. $f(x) = 3x^4 + 4x^3 - 12x^2 + 2$

3. $f(x) = x^3$

For 4-6, find the open interval on which f is concave up and on which f is concave down.

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

5. $f(x) = x^3$

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

For 7 and 8 find any inflection points of f .

7. $f(x) = x^4$

8. $f(x) = x^3$

**Note: If question asks where the relative minimum/maximum occurs, give the x -value.
If question asks for the relative minimum/maximum, give the y -value.**