

Name _____ Date _____

Instructions: Please show all of your work as partial credit will be given where appropriate, **and** there may be no credit given for problems where there is no work shown. All answers should be completely simplified, unless otherwise stated. (You may use your calculator.)

1. (10 points) Identify all the critical points.

$$f(x) = x^5 - \frac{25}{3}x^3 + 20x - 1 \quad \text{on } [-3, 2]$$

Critical points: _____

Absolute (or global) maximum point: _____

Absolute (or global) minimum point: _____

2. (5 points) For $y = x^4 + 2x + 1$, if x changes from 2 to 2.005, approximately how much does y change?

Answer 2: _____