

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

Date: \_\_\_\_\_

**Learning Goal 4.1**

Using derivative tests for curve sketching.

**More Questions**

1. Find all critical numbers, the interval which  $f$  is increasing or decreasing, and locate any local max or min for.
  - a.  $f(x) = 2x^3 - 3x^2 - 12x$
  - b.  $f(x) = x^4 - 8x^3 + 18x^2$
  - c.  $f(x) = x^4 - 8x^2$
  - d.  $f(x) = \frac{2x}{x^2 + 9}$
  - e.  $f(x) = x^3 + 3x^2 + 1$