Name_____

Date_____

Calculus Independent Study Path

Unit 4 Practice Test

Graph each of the following functions. Be sure to include critical points, inflection points, points of discontinuity, assymptotes, and limits at positive and negative infinity.

1.

$$y = \frac{x}{(x^2 - 9)(x^2 + 9)}$$

2.

$$y = \sqrt{\frac{x^2 + 9}{x}}$$

Calculate the following limits:

3.

$$\lim_{x \to 1} \frac{\sin \pi x}{x - 1}$$

4.

$$\lim_{x \to 0} \frac{\cos(\sin x) - 1}{x^3}$$