

Quiz A:

Calculus of Parametric Curves

Name \_\_\_\_\_

Use the following parametric curves to answer each question

$$x = t^2 + 2t, \quad y = t^2 - 2t + 3$$

1. Find  $\frac{d^2y}{dx^2}$

2. Find the highest point on the parametric curve from  $0 \leq t \leq 2$

3. Find the points on the curve where the tangent is horizontal or vertical.

4. Find the length of the arc on the following interval  $0 \leq t \leq 2$