

QUIZ#1 Math202-sec8.Net Time Allowed: 20 minutes

Name:

ID #:

Serial #:

Exercise1:

Show weather or not the differential equation  $y' = \sqrt{y^2 - 9}$  has a unique solution through the point  $(2, -3)$ . **Justify clearly your answer !**

Exercise2:

Solve the initial value problem:

$$\frac{dy}{dx} = \frac{\sqrt{1 - y^2}}{x - x^2}, \quad y\left(\frac{1}{2}\right) = 1.$$