

## Math 285 Section G8, Makeup for Quiz Number 2

Fall, 2000

Name:

1. (3 points) Some of the differential equations below are autonomous, some are not. Similarly, some are separable, some are not. In each case, circle or underline the questions for which the answer is “true”.

$$\begin{array}{lll} y'(t) = y^2 + t^2 & \text{is autonomous?} & \text{is separable?} \\ y'(t) = t^2 + t + 3 & \text{is autonomous?} & \text{is separable?} \\ y'(t) = \frac{y^2}{1+t^2} & \text{is autonomous?} & \text{is separable?} \end{array}$$

2. (2 points) Use separation of variables to solve the differential equation

$$y'(t) = -2yt, \quad y(0) = 1.$$