

**MATH 246 Groupwork 1.3**

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

1. Explicitly solve the separable differential equation  $y' = 2te^{-y}$ .

2. Implicitly solve the separable differential equation  $\frac{dy}{dx} = \frac{y^2 \cos x}{2y^3 - 1}$ .

3. Explicitly solve the separable initial value problem  $y' = ty^2$  with  $y(1) = 3$ .

4. Explicitly solve the separable initial value problem  $y' = (2t - 1)(y - 1)$  with  $y(0) = -2$ .