## M20580 L.A. and D.E. Tutorial Quiz 9 $\,$

1. Find an integrating factor for the following differential equation (**Note**, you DON'T need to solve it!)

$$y' = t^3 - 2ty$$

2. Solve the differential equation  $y' = y^2 e^t$  subject to the initial condition  $y(1) = \frac{1}{e}$ .