Worksheet 2: Integrating Factors and Separable Equations I

MATH 2310, Spring 2019   Grade: / 40

1. (20 pts) Solve the initial value problem

$$t^3 y' + 4t^2 y = e^{-t}, \quad y(-1) = 0, \quad t < 0$$

2. (20 pts) Solve the initial value problem

$$x\,dx + ye^{-x}\,dy = 0, \quad y(0) = 1$$