Math 212
Quiz 2 1/28/20 **Name:** _____

1. Use an integrating factor to determine the general solution $x(t)$ of the linear ODE

$$x' + \left(\frac{2}{t}\right) x \;=\; \frac{\cos t}{t^2}\;,$$

then find the unique solution satisfying $x(\pi) = 0$.

2. Use an integrating factor to determine the general solution $x(t)$ of the linear ODE

$$tx' + x = t^2 \ ,$$

then find the unique solution satisfying the initial condition $x(1) = 1$.