MTH 267, Quiz #3, Fall 2018   Name _____

Instructions: Show all work. Use exact answers unless otherwise asked to round.

1. Solve the differential equation $\frac{dy}{dx} = 2xy^2 + x$ using separation of variable for the general solution.

2. Solve the differential equation $4y' + 12x^3y = x^3, y(1) = 1$ using the method of integrating factors (reverse product rule) for the particular solution.