

## Practice Quiz 4 MATH 2280, ORDINARY DIFFERENTIAL EQUATIONS, FALL 2023

NAME:

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**Problem 1. Chapter 5. 5.c** Using the methods developed in Chapter 5 for First Order Linear differential equations, find the general solution of the following ODE.

$$\frac{dy}{dx} = 4y + 16x$$

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**Solution:**

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**Problem 2. Chapter 6.2** (10 points) Using substitutions appropriate to homogeneous first order differential equations, as described in Section 6.3, find the general solution for the differential equation.

$$\frac{dy}{dx} = \frac{y}{x} + \frac{x}{y}$$

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**Solution:**