

Math 3280 Worksheet 6: Euler's Method

Group members (2 to 4): \_\_\_\_\_

- (1) Use Euler's method to estimate  $y(1)$  if  $y(0) = 1$  and  $\frac{dy}{dx} = \frac{y}{2-x} + x^2$ , using 1, 2, and 4 steps.

- (2) Find the exact value of  $y(1)$  by solving the initial value problem (note that the ODE is linear).