

Math 3280 Worksheet 16: review

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

(1) Compute the value of  $y(1)$  if  $\frac{dy}{dx} = 2xy^2$  and  $y(0) = 2$ .

(2) Approximate  $y(1)$  from the initial value problem above by using:

- (a) 1 step of Euler's method
- (b) 1 step of the Improved Euler Method
- (c) 2 steps of the Improved Euler Method

Do these seem to be converging to the correct answer?