

Quiz 9 — 12/01/16

Answer all questions in a clear and concise manner. Answers that are without explanations or are poorly presented may not receive full credit.

Consider the following differential equation with initial condition:

$$\frac{dy}{dx} = \frac{2x}{y}; \quad y(0) = 2.$$

1. Use Euler's method with step size $h = 1.0$ to approximate $y(3)$ where $y(x)$ is the solution to the initial value problem.

2. Solve the differential equation and find the actual value of $y(3)$.