

## Explicit Euler Method

$$y_1 = y_0 + hf(y_0)$$

$$y_1 = 40 + 10^{-3}(50 - 2y_0)$$

$$y_1 = 39.97$$

$$y_2 = y_1 + hf(y_1)$$

$$y_2 = 39.97 + 10^{-3}(50 - 2y_1)$$

$$y_2 = \frac{566799}{16700} \approx 39.94$$

$$y_3 = y_2 + hf(y_2)$$

$$y_3 = \frac{566799}{16700} + 10^{-3}(50 - 2y_2)$$

$$y_3 = 33.92217976 \approx 33.92$$

$$y_4 = y_3 + hf(y_3)$$

$$y_4 = 33.92217976 + 10^{-3}(50 - 2y_3)$$

$$y_4 = 33.9043354 \approx 33.90$$

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$$y_{n+1} = y_n + 10^{-3}(50 - 2y_n)$$