

Spring 2021
Free Response
Chapter 08.02 Euler's method

The velocity (m/s) of a body is given as a function of time (seconds) by

$$v(t) = t^2 + 4, t \geq 0$$

Using Euler's method with a step size of 5 seconds, estimate the distance traveled by the body from $t = 2$ to $t = 12$ seconds and compare the value with the exact value.

Answer: Estimate is 305m; Exact is 613.33m