

MIDTERM EXAM

PROBLEM 1

16.3.03.

An object of mass 0.25 Kg oscillates in simple harmonic motion along the x-axis with a displacement given by

$$x(t) = 0.25\text{m} + 0.50\text{m} \cos \left[\left(2.0 \frac{\text{rad}}{\text{sec}} \right) \cdot t + \frac{\pi}{6} \right]$$

(a) Make a rough sketch of the displacement of this object as a function of time for several periods.

