

- 4 An object of mass 80g oscillates with simple harmonic motion. The variation with time t of the displacement x of the object is shown in Fig. 4.1.

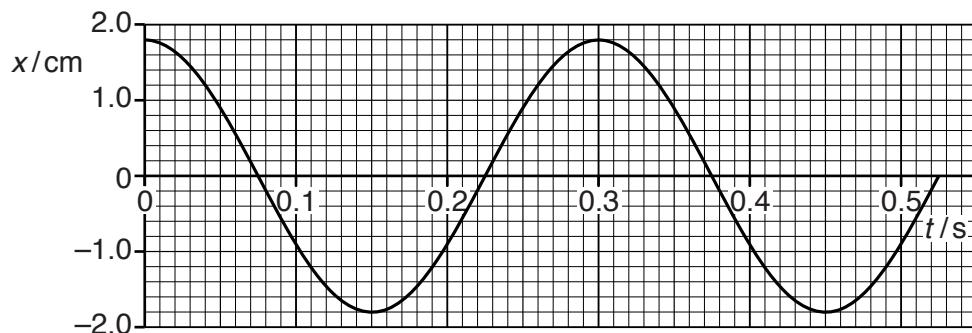


Fig. 4.1

- (a) Use Fig. 4.1 to determine the amplitude and the period of the oscillations.

amplitude = cm

period = s
[1]

- (b) Use Fig. 4.1 and your answers in (a) to calculate the kinetic energy of the object at time $t = 0.19\text{ s}$.

kinetic energy = J [3]

[Total: 4]