12 An object moves vertically with simple harmonic motion just behind a garden fence.
From the other side of the fence, the object is visible for 2.0 s in each cycle. It is   hidden behind the fence for 6.0 s. The angular frequency of the object is

A 0.79 rad s^{-1} **B** 1.0 rad s^{-1} **C** 3.1 rad s^{-1} **D** 1.6 rad s^{-1}