

**16** The buzz of a bee is caused by rapid oscillations of the insect's wings, and takes place at a frequency of 75 Hz. The amplitude of the oscillation of the tip of a bee's wing is 1.0 cm.

What is the maximum speed of the tip of the wing? (Assume that the oscillations are simple harmonic.)

**A**  $0.047\text{ ms}^{-1}$

**B**  $0.47\text{ ms}^{-1}$

**C**  $4.7\text{ ms}^{-1}$

**D**  $47\text{ ms}^{-1}$