

1 Which expression has the same SI base units as pressure?

A $\frac{\text{force}}{\text{length} \times \text{speed}}$

B $\frac{\text{force}}{\text{length} \times \text{time}}$

C $\frac{\text{mass}}{\text{length} \times (\text{time})^2}$

D $\frac{\text{mass} \times (\text{time})^2}{\text{length}}$

2 What is an approximate value for the speed of sound in air?

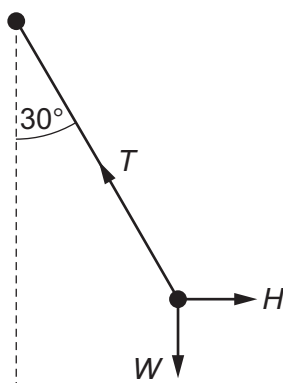
A 30 ms^{-1}

B 300 ms^{-1}

C $30\,000 \text{ ms}^{-1}$

D $300\,000\,000 \text{ ms}^{-1}$

3 A pendulum bob is held stationary by a horizontal force H . The three forces acting on the bob are shown in the diagram.



The tension in the string of the pendulum is T . The weight of the pendulum bob is W . The string is held at an angle of 30° to the vertical.

Which statement is correct?

A $H = T \cos 30$

B $T = H \sin 30$

C $W = T \sin 30$

D $W = T \cos 30$