

- 24 The speed v of waves in deep water is given by the equation

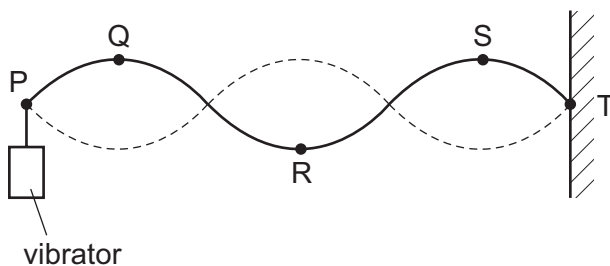
$$v^2 = \frac{g\lambda}{2\pi}$$

where λ is the wavelength of the waves and g is the acceleration of free fall.

A student measures the wavelength λ and the frequency f of a number of these waves.

Which graph should he plot to give a straight line through the origin?

- A f^2 against λ
 - B f against λ^2
 - C f against $\frac{1}{\lambda}$
 - D f^2 against $\frac{1}{\lambda}$
- 25 A stationary wave on a stretched string is set up between two points P and T.



Which statement about the wave is correct?

- A Point R is at a node.
- B Points Q and S vibrate in phase.
- C The distance between P and T is three wavelengths.
- D The wave shown has the lowest possible frequency.

Space for working