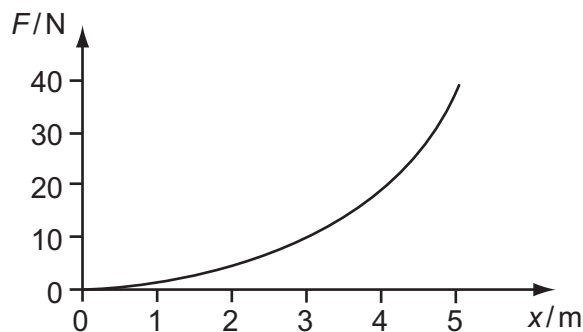


- 23 The force  $F$  required to extend a sample of rubber by a distance  $x$  is found to vary as shown.



The energy stored in the rubber for an extension of 5 m is

- A** less than 100 J.
- B** 100 J.
- C** between 100 J and 200 J.
- D** more than 200 J.
- 24 Which of the following is a longitudinal wave?
- A** a light wave travelling through air
- B** a radio wave from a broadcasting station
- C** a ripple on the surface of water
- D** a sound wave travelling through air
- 25 A stationary sound wave is set up along the line joining two loudspeakers.
- Which measurement is sufficient on its own to enable you to deduce the wavelength of the wave?
- A** the amplitude of the sound wave
- B** the distance between the two loudspeakers
- C** the distance between two adjacent antinodes
- D** the frequency of the sound wave
- 26 A wave of amplitude 20 mm has intensity  $I_X$ . Another wave of the same frequency but of amplitude 5 mm has intensity  $I_Y$ .

What is  $\frac{I_X}{I_Y}$ ?

- A** 2                      **B** 4                      **C** 16                      **D** 256