

- 1 Which line of the table gives values that are equal to a time of 1 ps (one picosecond) and a distance of 1 Gm (one gigametre)?

	time of 1 ps	distance of 1 Gm
A	10^{-9} s	10^9 m
B	10^{-9} s	10^{12} m
C	10^{-12} s	10^9 m
D	10^{-12} s	10^{12} m

- 2 Which of the following definitions is correct and uses only quantities rather than units?

- A** Density is mass per cubic metre.
- B** Potential difference is energy per unit current.
- C** Pressure is force per unit area.
- D** Speed is distance travelled per second.

- 3 When a beam of light is incident on a surface, it delivers energy to the surface. The intensity of the beam is defined as the energy delivered per unit area per unit time.

What is the unit of intensity, expressed in SI base units?

- A** $\text{kg m}^{-2} \text{ s}^{-1}$ **B** $\text{kg m}^2 \text{ s}^{-3}$ **C** kg s^{-2} **D** kg s^{-3}