

**26** A wave of amplitude  $a$  has an intensity of  $3.0 \text{ W m}^{-2}$ .

What is the intensity of a wave of the same frequency that has an amplitude  $2a$ ?

- A**  $4.2 \text{ W m}^{-2}$       **B**  $6.0 \text{ W m}^{-2}$       **C**  $9.0 \text{ W m}^{-2}$       **D**  $12 \text{ W m}^{-2}$

**27** An electromagnetic wave has a wavelength that is numerically of the same order of magnitude as