

**28** A beam of light with power  $P$  has an area of cross-section  $A$ .

The amplitude of the light waves in the beam is  $X$ .

The beam of light is then changed to one with the same frequency but with an increased amplitude of  $4X$  and an area of cross-section reduced to  $\frac{A}{3}$ .

What is the power of the new beam?

**A**  $1.3P$

**B**  $5.3P$

**C**  $12P$

**D**  $48P$