

- 17** A light wave of amplitude  $A$  is incident normally on a surface of area  $S$ . The power per unit area reaching the surface is  $P$ .

The amplitude of the light wave is increased to  $2A$ . The light is then focused on to a smaller

area  $\frac{1}{3}S$ .

What is the power per unit area on this smaller area?

**A**  $6P$

**B**  $12P$

**C**  $18P$

**D**  $36P$

