

- 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  $36P$

