

- 3 A radio aerial of length  $L$  emits a signal of wavelength  $\lambda$  and power  $P$  when the current is  $I$ . These quantities are related by

$$P = kI^2 \left( \frac{L}{\lambda} \right)^2$$

where  $k$  is a constant.

Which unit, if any, should be used for the constant  $k$ ?

- A volt
- B ohm
- C watt
- D no unit