

- 17** The intensity of a wave depends on the amplitude. The intensity is also proportional to the square of the frequency.

A wave has frequency 5.0 Hz, amplitude 2.4 cm and intensity  $I$ .

What is the intensity of a similar wave of frequency 15.0 Hz and amplitude 1.2 cm?

**A**  $\frac{4}{9} I$

**B**  $\frac{2}{3} I$

**C**  $\frac{9}{4} I$

**D**  $36 I$