

22 Sound wave X has intensity  $10^{12}$  times greater than that of sound wave Y.

By how much is the amplitude of X greater than the amplitude of Y?

- A  $10^6$  times
- B  $3.16 \times 10^6$  times
- C  $5 \times 10^{11}$  times
- D  $10^{12}$  times