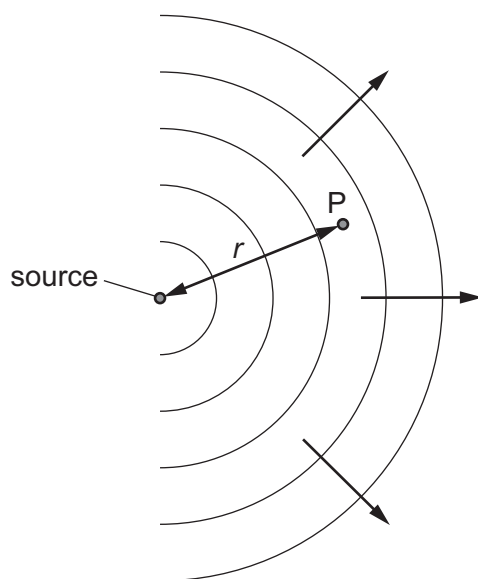


26 What is the approximate range of frequencies of infra-red radiation?

- A** $1 \times 10^3 \text{ Hz}$ to $1 \times 10^9 \text{ Hz}$
- B** $1 \times 10^9 \text{ Hz}$ to $1 \times 10^{11} \text{ Hz}$
- C** $1 \times 10^{11} \text{ Hz}$ to $1 \times 10^{14} \text{ Hz}$
- D** $1 \times 10^{14} \text{ Hz}$ to $1 \times 10^{17} \text{ Hz}$

27 A small source emits spherical waves.



The wave intensity I at any point P, a distance r from the source, is inversely proportional to r^2 .

What is the relationship between the wave amplitude a and the distance r ?

- A** $a^2 \propto \frac{1}{r}$
- B** $a \propto \frac{1}{r}$
- C** $a \propto \frac{1}{r^2}$
- D** $a \propto \frac{1}{r^4}$

Space for working