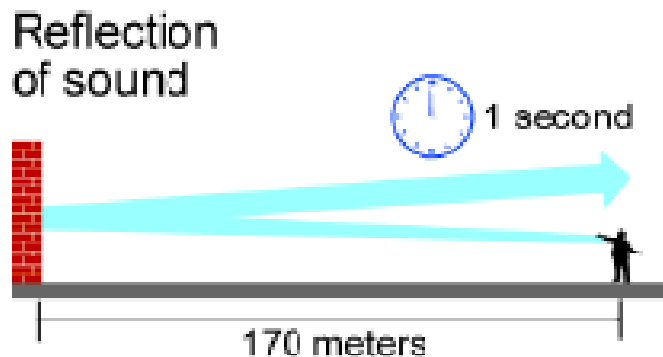


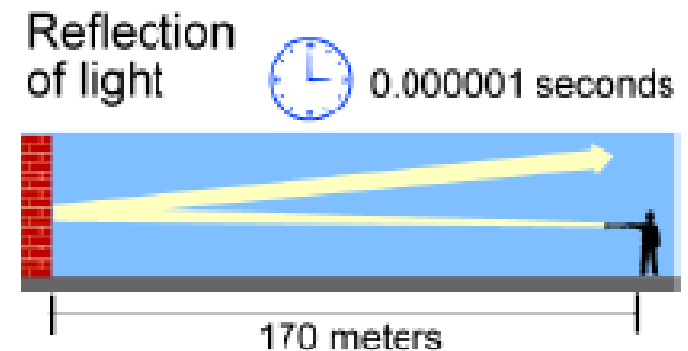
The speed of light

- The speed at which light travels through air is approximately 300 million meters per second.
- Light travels almost a million times faster than sound.



Speed of sound
340 m/sec

Speed of light
300,000,000 m/sec



- The speed of light is so important in physics that it is given its own symbol, a lower case c .
- The best accepted experimental measurement for the speed of light in air is 299,792,500 m/sec.
- For most purposes, we do not need to be this accurate and may use a value for c of 3×10^8 m/sec.

Calculate time

Calculating
the time it
takes for light
and sound to
go a mile



Speed of sound

340 m/sec

Speed of light

300,000,000 m/sec

- Calculate the time it takes light and sound to travel the distance of one mile, which is 1,609 meters.