

Q1) The speed of light in air is $3 \times 10^8 \text{ m s}^{-1}$, in water it is $2.25 \times 10^8 \text{ m s}^{-1}$ and in glass it is $2 \times 10^8 \text{ m s}^{-1}$.

2) A medium is denser than air, if its speed of light in the medium is less than the speed of light in air. Similarly, a medium is less dense than air, its speed of light in the medium is more than the speed of light in air.

3) A medium is denser when the speed of light gets reduced when light travels through that. When light travels through ~~the~~ water, its speed gets reduced. Therefore water is denser than air.

4) Speed of light is more than speed of light in glass, which means air is rarer than glass.

5) The bending of light when it passes from one substance to another, it is called refraction.