

Answer on Question #47008, Physics, Optics

The speed of light in glass is approximately ----- that in air

- 100 times faster than*
- 100 times slower than*
- 50 per cent faster than*
- 33 percent slower than***

By definition, refractive index is:

$$n = \frac{c}{v}$$

Where c – is speed of light in vacuum, v – is speed of light in medium.

$$v = \frac{c}{n} = \frac{c}{1.5} = \frac{2}{3}c \approx 0.67c$$

So, it's approximately **33%** slower.