

Find the refractive index of diamond if light travels in it with a speed of 1.2×10^8 m/s.

Answer:

The refractive index of substance is the quantity equal to the relation of a velocity of light in vacuum from a velocity of light in given substance.

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

Velocity of light in vacuum, $c = 3 \times 10^8$ m/s

$$n = \frac{3 \times 10^8}{1.2 \times 10^8} = 2.5$$

Answer: 2.5