

The speed of light in free space is  $c \equiv 2.99792458 \times 10^8$  m/s.

Find the time  $\Delta t$ , for light to travel 1 m.

A)  $3.33564095 \times 10^{-9}$  s

B)  $3.33564095 \times 10^{-8}$  s

C)  $3.33564095 \times 10^{-7}$  s

D)  $3.33564095 \times 10^{-6}$  s

E)  $3.33564095 \times 10^{-10}$  s

Since speed  $\equiv \frac{\text{distance}}{\text{time}}$ , we have

$$\Delta t = \frac{\text{distance}}{\text{speed}} = \frac{1 \text{ m}}{2.99792458 \times 10^8 \text{ m/s}} = 3.33564095 \times 10^{-9} \text{ s}$$

Answer **A**.

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