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Assignment

→ Wavelength from the image = 0.46581 Km

⇒ L = 465.81 Km

Time period (T) = 8 sec (Given in the Lecture)

$$L = \frac{gT^2}{2\pi} \tanh(kd)$$

$$465.81 = \frac{9.81 \times (8)^2}{2\pi} \times \tanh\left(\frac{2\pi}{465.81} \times d\right)$$

$$4.659 = \tanh\left(\frac{2\pi}{465.81} \times d\right)$$

⇒ Error as the value of tanh should be in range (-1 to 1)

Assume, T = 20 sec

$$\Rightarrow 465.81 = \frac{9.81 \times (20)^2}{2 \times 3.14} \tanh\left(\frac{2\pi}{46581} \times d\right)$$

$$\Rightarrow \frac{2\pi}{465.81} \times d = 0.963$$

$$d = 71.41 \text{ m}$$