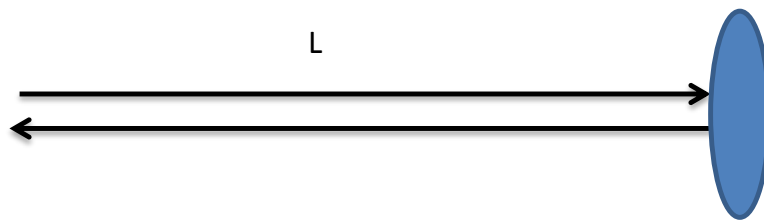# Answer on Question #38207, Physics, Other

Question:

A sonar station picks up a return signal after 3seconds. How far away is the object?(speed of sound in water=1440m/s)

Answer:

Delay time equals:

$$t = \frac{2L}{v}$$

Where L is distance to object, v is speed of sound in water.

Therefore:

$$L = \frac{vt}{2} = \frac{1440 * 3}{2} = 2160\frac{m}{s}$$

Answer: $2160\frac{m}{s}$