

**Answer on Question #47919-Physics-Mechanics-Kinematics-Dynamics**

A person stands at a point 340 m in front of the face of a sheer cliff. If the person shouts, how much time will elapse before an echo is heard?

A) 0.49 s B) 0.99 s C) 340 s D) 344 s E) 1.98 s

**Solution**

The sound wave will have to traverse  $2 \cdot 340\text{m} = 680\text{m}$  (as it has to reach the cliff and then return to the person)

Velocity of sound is  $343 \frac{\text{m}}{\text{s}}$ .

Time elapsed is

$$t = \frac{680}{343} = 1.98 \text{ s.}$$

**Answer: E) 1.98 s.**

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