

④

Kinematics

3.4. Find the acceleration of a body whose velocity increases from 11 ms^{-1} to 33 ms^{-1} in 10 secs.

DATA:-

$$\text{Initial velocity} = 11 \text{ ms}^{-1}$$

$$\text{Final velocity} = 33 \text{ ms}^{-1}$$

$$\text{Time taken} = 10 \text{ secs}$$

$$\text{Acceleration} = ?$$

SOLUTION:-

$$a = \frac{v_f - v_i}{t}$$

$$a = \frac{33 - 11}{10}$$

$$a = \frac{22}{10}$$

$$a = 2.2 \text{ ms}^{-2}$$

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