



INDIAN SCHOOL NIZWA - WORKSHEET

PHYSICS

CH: 3 MOTION IN A

STRAIGHT LINE

Name: _____

Date: _____

Class: XI Sec: A

- A vehicle travels half the distance L with a speed V_1 and the other half with a speed V_2 then its average speed is -----
 - $[V_1 + V_2] / 2$
 - $[2V_1 + V_2] / [V_1 + V_2]$
 - $2V_1V_2 / [V_1 + V_2]$
 - $L[V_1 + V_2] / V_1V_2$
- A boat is travelling in a river with velocity 6km/h (i) upstream (ii) downstream. What is the resultant velocity of the boat if the velocity of the flow of water is 4km/h ?
- Two balls of different masses (one lighter and other heavier) are thrown vertically upwards with same initial speed. Which one rises to the greater height?
- A ball is released from the top of a tower of height h metre. It takes T seconds to reach the ground. What is the position of the ball in $T/3$ seconds?
- A body is uniformly accelerated. The body always slows down before the time, when its velocity becomes zero. Show the above statement graphically, when
 - Both v and a are positive
 - $V = -ve$ and $a = +ve$
 - $V = +ve$ and $a = -ve$
 - Both v and a are negative.
- When two bodies move uniformly towards each other, the distance between them diminishes by 16m in every 10s . If the bodies move with velocities of the same magnitude and in the same direction as before, the distance between them will increase by 3m every 5s . What is the velocity of each body?
- From the top of a multi-storeyed building 40m tall, a boy projects a stone vertically upwards with an initial velocity of 10m/s such that it eventually falls to the ground. After how long will the stone strike the ground?
- The displacement of a particle is proportional to the cube of the time elapsed. How does the acceleration of the body depend on the time elapsed?
- A motor car covers $1/3$ part of the total distance with velocity 10km/h and the second $1/3$ with a velocity 20km/h and the rest $1/3$ with the velocity 60km/h . What is the average speed of the car?
- A parachute bails out from an aeroplane and after dropping through a distance of 40m , he opens the parachute and decelerates at 2m/s^2 . If he reaches the ground with a speed of 2m/s , how long is he in air? At what height did he bail out from the plane?

