

WORK SHEET

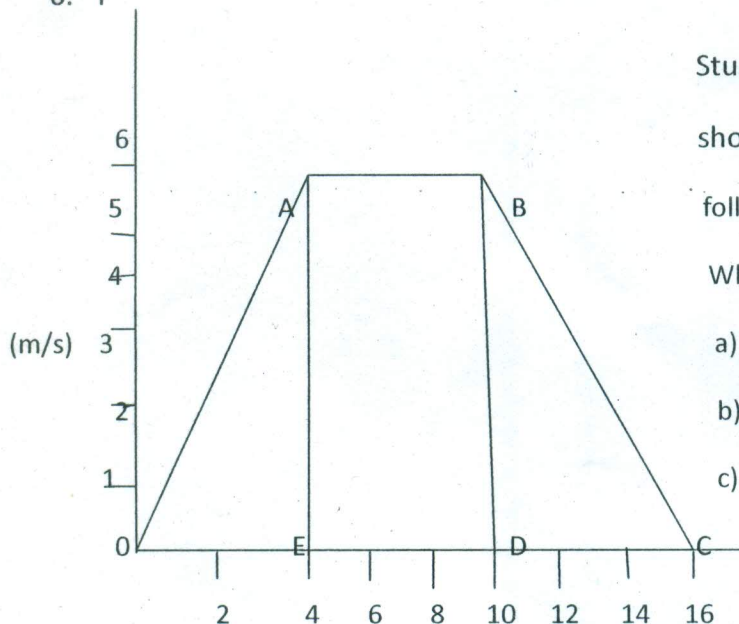
Class: IX

Subject: Physics

SOLVE THE FOLLOWING PROBLEMS:

1. Suppose you walk across a room of length with a velocity of one and a half kilometer per hour. Express this velocity in m/s and find the time you will take to move across the room.
2. A car travels 30km at a uniform speed of 40km/h and the next 30km at a uniform speed of 20km/h. Find its average speed.
3. A train travels at 60km/h for 0.52h; at 30km/h for the next 0.24 h and at 70km/h for the next 0.71h. What is the average speed of the train?
4. A scooter acquires a velocity of 36km/h in 10 seconds just after the start. It takes 20 seconds to stop. Calculate the acceleration in two cases?
5. A train 100m long moving on a straight level track passes a pole in 5s. Find a) the speed of the train b) the time it will take to cross a bridge 500m. long.

6. I



Study the speed time graph of a body shown in the figure and answer the following questions:

What type of motion is represented by

- a) OA
- b) AB
- c) BC

d) Find out acceleration body.

e) Find out retardation of the body.

f) Find out the distance travelled by the body from A to B

7. In the above question, calculate
 - a) distance travelled from O to A
 - b) distance travelled from B to C
 - c) Total distance travelled by the body in 16 sec.

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8 A car is moving on a straight road with uniform acceleration. The following table gives the speed of the car at various instants of time:

TIME(s)	0	10	20	30	40	50
Speed(m/s)	5	10	15	20	25	30

Draw the speed time graph choosing a convenient scale. Determine from it i) the acceleration of the car
ii) the distance travelled by the car in 50 sec.

9. A moving train is brought to rest within 20 seconds by applying brakes. Find the initial velocity, if the Retardation due to brakes 2 m/s^2 .

10. An object undergoes an acceleration of 8 m/s^2 starting from rest. Find the distance travelled in 1 second. (4m)

11. A body is accelerating at a constant rate of 10 m/s^2 . If the body starts from rest, how much distance will it cover in 2 seconds? (20m)

12. A car accelerates uniformly from 18 km/h to 36 km/h in 5 second. Calculate i) the acceleration and ii) the distance covered by the car in that time. (1 m/s^2 , 37.5 m)

13. A motor cycle moving with a speed of 5 m/s is subjected to an acceleration of 0.2 m/s^2 . Calculate the speed of the motor cycle after 10 seconds, and the distance it travels in this time. (97 m/s ; 60 m)