QUES 2

A table is given below of a particle moving along x-axis. In the table, speed of particle at different time intervals is shown.

Table 6.1

Time interval (in sec)	**Speed of particle** (in m/s)
0 – 2	2
2 – 5	3
5 – 10	4
10 – 15	2

Find total distance travelled by the particle and its average speed.

Solution Distance = speed × time

$\therefore$ Total distance $= (2\times 2) + (3)(3) + (5)(4) + (5)(2) = 43$ m

Total time taken is 15 s. Hence,

$$\text{Average speed} = \frac{\text{Total distance}}{\text{Total time}}$$

$$= \frac{43}{15} = 2.87 \text{ m/s}$$