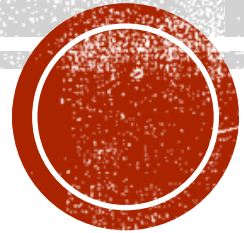
HELLO EVERYONE

TIME, SPEED & DISTANCE



BASIC QUESTIONS

1.How long will Ramesh take to run around a square park of edge 50 m. If he runs at the rate of 18km/hr ?

(a) 30 sec (b) 25 sec (c) 40 sec (d)45 sec

2. The ratio between the speeds of two buses is 11:9. If the second bus runs 270km in 15 hours, then the speed of the first bus is ?

(a) 20 km/hr (b) 23 km/hr (c) 21 km/hr (d) 22 km /hr

3.To reach at a destination, D takes 45 minutes if he drives at a speed of 60 km/h. Due to some urgency, he is to reach the destination in 30 minutes. What should be his speed in km/h ?

(a) 80 km/hr (b) 75km/hr (c) 90km/hr (d) 60km/hr

4. Walking at 5/7 of his normal speed, Manish is 20 minutes late in reaching his office. The usual time taken by him to cover the distance between his home and his office is:

(a) 56 min (b) 42 min (c) 58 min (d) 45 min

5. A train can travel 75% faster than a car. Both start from point A at the same time and reach point B, 70 km from A, at the same time. However, the train loses about 18 minutes in stopping at stations on the way. What is the speed of the car?

(a) 90km/hr (b) 100km/hr (c) 80km/hr (d) 110km/hr

WHEN DISTANCE IS CONSTANT AND TOTAL OR DIFFERENCE OF TIME IS GIVEN

6. A person travels from one place to another at 60 km/hr and returns at 75 km/hr. If the total time taken is 6 hours, then find the total distance travelled.

(a) 200km (b) 400km (c) 450km (d) 300km

7. A student goes to school at a speed of $5\frac{1}{2}$ km/h and returns at a speed of 4 km/h. If he takes $4\frac{3}{4}$ hours for the entire journey, then the total distance covered by the student (in km) is:

(a) 11km (b) 16km (c) 22km (d) 24km

8. A person cycles from the hostel to the college at a speed of 20 km/h and reaches 13.5 minutes late. If he cycles at a speed of 24 km/h and reaches 13.5 minutes early, find the distance (in km) between the hostel and the college.

(a) 50km (b) 54km (c) 52km (d) 48km

9. A boy when goes to his school by 12 km/hr speed, reaches 20 mins late and when he covers the distance by 16 km/hr reaches 5 mins late. Find speed by which he may reach on time and also find distance of his school.

(a) 16 km/hr,12 km (b) 18 km/hr,12 km (c) 20 km/hr,10km (d) 15 km/hr, 10 km

10. To cover a distance of 416 km, a train A take $2\frac{2}{3}$ hours more than train B. If the speed of A is doubled, It wou $1\frac{1}{3}$ take hours less than B. What is the speed (in km/h) of train A?

(a) 56km (b) 54km (c) 52km (d) 48km

11. A person had to cover a certain distance with bike in 48 min but after travelling for 36 min his speed is reduced by 10 km/h and he takes 3 min more than usual to cover the remaining distance, then find actual speed of bike.

(a) 50km/hr (b) 60km/hr (c) 51km/hr (d) 55km/hr

AVERAGE SPEED

$$\text{Average speed} = \frac{\text{Total Distance Travelled}}{\text{Total Time Taken}}$$

If A goes from P to Q with speed of x km/h and returns from Q to P with speed of y km/h, then the average speed of total journey is

$$\text{Average speed} = \frac{2xy}{x+y} = \frac{\textbf{total distance}}{\textbf{total time taken}}$$

If a distance is travelled with three different speeds a km/h, b km/h and c km/h, then Average speed of total journey $= \dfrac{3abc}{ab+bc+ca}$ km/h

12. Amit went to market with a speed of 30km/hr and return back to his home at a speed of 40km/hr . Find the average speed of amit in this whole transit

13.A particular distance is travelled with 5 km/hr, 3 km/hr and 4km/hr. Find average speed of the whole journey.

14. Rama walks to her office 5 km away from home. In the morning, she covers the distance in 1 hour whereas, while returning home in the evening, she takes 15 more minutes to cover the same distance. Find her average speed (in km/h) during the two-way journey.

(a) 14/3 km/hr (b) 35/3 km/hr (c) 40/9 km/hr (d) 18/5 km/hr

15. A person covers $\frac{1}{4}$ of his journey at the speed of 25 km/h, $\frac{1}{2}$ of the journey at 40km/h and the remaining at the speed of 50 km/h. Find his average speed per hour for the whole journey (in km/h).

(a) $36\frac{4}{11}$ (b) $34\frac{4}{11}$ (c) $34\frac{6}{11}$ (d) $36\frac{6}{11}$

16. A tourist covers half of his journey by train at 60 kmph, half of the remainder by bus at 30 kmph, and the rest by cycle at 10 kmph. The average speed of the tourist in kmph during his entire journey is

(a) 36km/hr (b) 30km/hr (c) 24km/hr (d) 18km/hr

17. Yash travels 204 km at 68 km/hr, the next 424 km at 53 km/hr and the next 366 km at 61 km/hr. What is his average speed (in km/hr) for the whole journey? (Corrected to two decimal places)

(a) 67.92 (b) 58.47 (c) 57.62 (d) 65.87

18. A local train without stoppages runs at an average speed of 88 km/hr, and with stoppages, at an average speed of 24 km/hr. What is the total time (in hours) taken by the local train for stoppages on a route of length 528 km?

(a) 16 Hr (b) 18 Hr (c) 20 Hr (d) 15 Hr