

IEM KOLKATA
SPEED, DISTANCE & TIME

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Q1) A boy increases his speed to $9/5$ times of his original speed. By this, he reaches his school 30 minutes before the usual time. How much time does he usually take?

- (a) 60 mins (b) 67 mins (c) 1 hr 7 min 5 secs (d) 1 hr 7 min 30 secs

Q2) P, Q and R are in a cycle race of 4500 metres. P cycles twice as fast as Q. R cycles $1/3$ rd as fast as Q. R completes the race in 45 minutes. Then where was Q from the finishing line when P finished the race?

- (a) 1350m (b) 1125m (c) 1250m (d) 2250m

Q3) In a 500m race, ratio of speed of A & B is 3:4. If A has a start of 140m, then by how many metres does A win?

- (a) 15 (b) 20 (c) 30 (d) 25

Q4) A train covers a certain distance in 45 mins. If its speed is reduced by 5km/hr, it takes 3 minutes more to cover the same distance. The distance (in km) is:

- (a) 64 (b) 60 (c) 54 (d) 80

Q5) Pratik travels 96kms at a speed of 16km/hr using a bike, 124 kms at 31 km/hr by car and another 105 kms at 7km/hr in horse cart. Then, find his average speed for the entire distance travelled?

- (a) 13km/hr (b) 17km/hr (c) 19km/hr (d) None

Q6) Rohit covers one-fourth of the total distance at 20 km/hr, one-fourth at 10 km/hr and rest of his journey at 80 km/hr. Find Rohit's average speed for the whole distance?

Q7) Anita travelled a distance for 11 minutes at the speed of 35km/hr in a auto. She travelled for 11 mins in a taxi at 55 km/hr & finally she travelled for 11 mins by bus at 42 km/hr to reach home. Find her average speed for the whole journey.

- (a) 52 km/hr (b) 64 km/hr (c) 34 km/hr (d) 44 km/hr

Q8) Ramesh sees a thief at a distance of 80m. Ramesh starts chasing the thief who is running at a speed of 5m/s. Ramesh is chasing him with a speed of 7m/s. How much distance does the thief cover before Ramesh catches him?

- (a) 120m (b) 100m (c) 240m (d) 200m

Q9) A thief is observed by a policeman from a distance of 420m. The thief starts running & the policeman chases him. The policeman and the thief run at a speed of 25 km/hr & 20 km/hr respectively. What is the distance between them after 3 minutes?

- (a) 250m (b) 320m (c) 170m (d) 230m

Q10) Ajay and Vijay travel from A to B at 17 km/hr and 19 km/hr, respectively. A is 72 km away from B. Vijay reaches B first and returns immediately and meets Ajay at C. Find the distance between B & C?

- (a) 2km (b) 3km (c) 4km (d) 6km

Q11) Surendra travels from home to office by car. With an average speed of 50 km/hr, he is late by 30 minutes. But when he comes with a speed of 60km/hr, he reaches his office 10 minutes earlier. How far is his office from his home?

- (a) 200km (b) 350km (c) 400km (d) None

Q12) Rohit drives from his home at a speed of 30km/hr and reaches his bank 20 minutes late. Then the next day he increases his speed by 15 km/hr but still he is late by 8 minutes. How far is his bank from his home?

- (a) 13km (b) 16 km (c) 18km (d) None

Q13) A travels from Jammu to Delhi and at the same time B starts from Delhi to Jammu. After passing each other, they complete their journeys in 361 hours and 289 hours, respectively. Find the ratio of speed of A to that of B?

- (a) 4:5 (b) 11:12 (c) 17:19 (d) 25:26

Q14) A car travelling with $\frac{5}{7}$ th of its actual speed covers 42 km in 1 hr 40 mins 48 seconds. Find the actual speed of the car.

- (a) 35 km/hr (b) 30 km/hr (c) 25 km/hr (d) None

Q15) A person can complete a journey in 28 hrs. He covers the first $\frac{1}{3}$ rd part of the journey at the rate of 81 km/hr & the remaining distance at the rate of 27 km/hr. What is the total distance of his journey?

- (a) 979 (b) 982 (c) 972 (d) 981