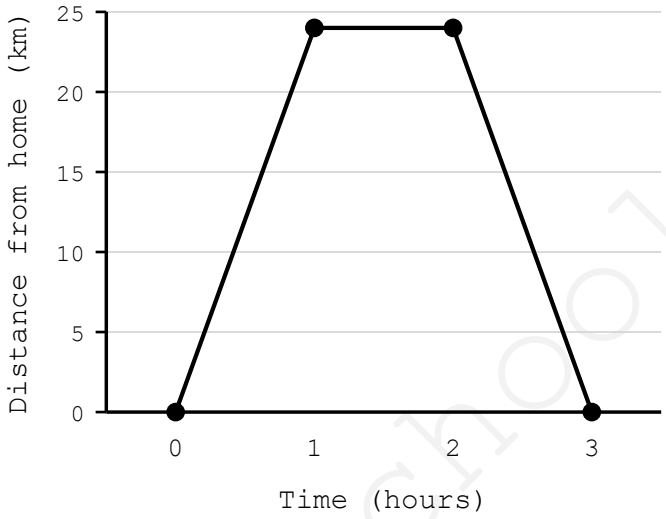
Speed, Distance & Time: Hard Practice Paper 7

Q1. The graph shows a cyclist's ride from home and back. What was her speed on the way home?



A. 24 km/h *B.* 12 km/h *C.* 48 km/h *D.* 8 km/h *E.* 0 km/h

Q2. A train 180 m long travelling at 30 m/s overtakes a train 120 m long travelling at 20 m/s in the same direction. How long does the overtaking take?

A. 10 seconds

B. 6 seconds

C. 30 seconds

D. 60 seconds

E. 12 seconds

Q3. A car travels the first 60 km of a 120 km journey at 40 km/h. What speed must it average for the second 60 km so that the average for the whole journey is 48 km/h?

A. 56 km/h *B.* 60 km/h *C.* 50 km/h *D.* 64 km/h *E.* 80 km/h

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Q4. The table shows a runner's time for each 100 m of a 400 m race. In which section was she running fastest?

Section	Time
First 100 m	13.2 s
Second 100 m	12.8 s
Third 100 m	13.5 s
Fourth 100 m	13.0 s

A. The fourth 100 m

B. The first 100 m

C. The third 100 m

D. The second 100 m

E. She ran at the same speed throughout

Q5. Two towns are 300 km apart. Cars set off towards each other at the same time, one at 70 km/h and the other at 80 km/h. How far from the first town do they meet?

A. 160 km *B.* 150 km *C.* 140 km *D.* 130 km *E.* 175 km

Q6. A car is travelling at a steady 108 km/h. How many metres does it travel in 5 seconds?

A. 90 m *B.* 540 m *C.* 150 m *D.* 108 m *E.* 300 m

Q7. A cyclist covers 63 km in 4 hours altogether, including two stops of 15 minutes each. What was his average speed while actually cycling?

A. 15.75 km/h

B. 18 km/h

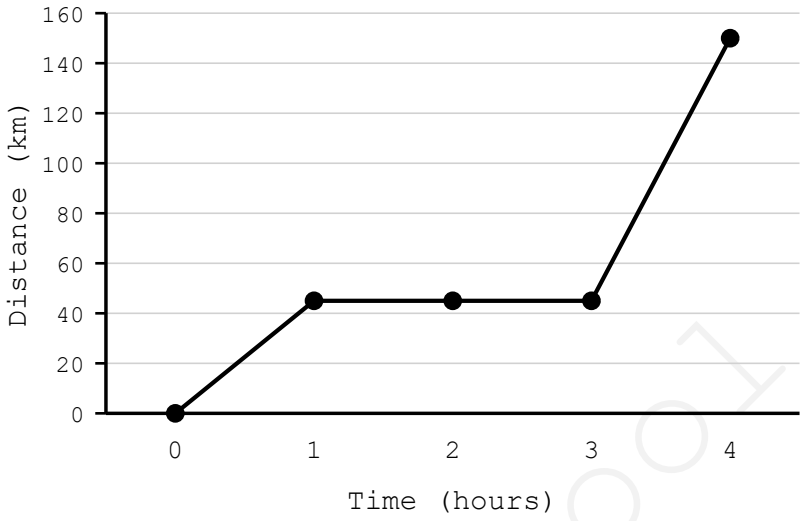
C. 16 km/h

D. 21 km/h

E. 20 km/h

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Q8. The graph shows a car's journey. What was its average speed for the whole journey, including the time it was stopped?



A. 75 km/h *B.* 45 km/h *C.* 50 km/h *D.* 37.5 km/h *E.* 105 km/h

Q9. A train is running 36 minutes late with 180 km still to go. That last part of the journey was timetabled to take 3 hours. What average speed does it need to arrive on time?

A. 90 km/h *B.* 60 km/h *C.* 72 km/h *D.* 80 km/h *E.* 75 km/h

Q10. Two runners start together on a 400 m circular track and run in opposite directions at 5 m/s and 3 m/s. After how long do they first meet?

A. 80 seconds

B. 50 seconds

C. 200 seconds

D. 133 seconds

E. 25 seconds

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Q11. Three of these journeys are at the same average speed. Which is the odd one out?

Journey	Distance	Time
W	120 km	2 hours
X	180 km	3 hours
Y	150 km	2.5 hours
Z	200 km	4 hours

A. Journey Y

B. Journey W

C. Journey X

D. Journey Z

E. They are all the same

Q12. Two cars cover the same journey, one at 60 km/h and the other at 40 km/h. The slower car takes 1 hour longer. How long is the journey?

A. 120 km *B.* 100 km *C.* 150 km *D.* 80 km *E.* 240 km

Q13. A sprinter runs 200 m in 21 seconds. What is her average speed in kilometres per hour, to the nearest whole number?

A. 24 km/h *B.* 30 km/h *C.* 42 km/h *D.* 36 km/h *E.* 34 km/h

Q14. A bus is timetabled to cover 44 km at an average of 55 km/h, but it actually averages only 40 km/h. How many minutes late does it arrive?

A. 26 minutes

B. 15 minutes

C. 22 minutes

D. 12 minutes

E. 18 minutes

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Q15. A cyclist has 36 km to ride. How much time does she save by riding at 18 km/h instead of 12 km/h?

A. 1 hour

B. 30 minutes

C. 1 hour 30 minutes

D. 45 minutes

E. 2 hours

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