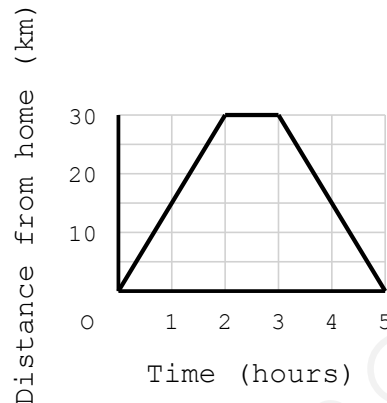


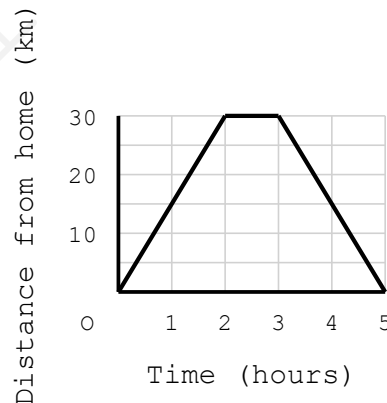
Coordinates & Graphs: Hard Practice Paper 8

Q1. The graph shows Priya's cycle ride away from home and back again. How far from home had she got at the furthest point?



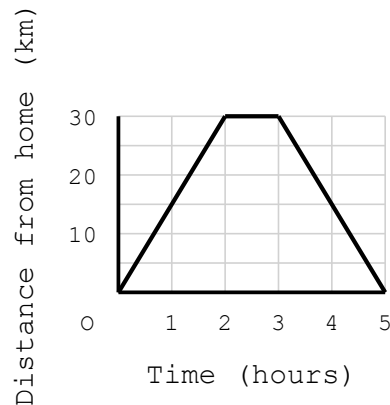
- A. 15 km B. 20 km C. 25 km D. 30 km E. 60 km

Q2. Use the same cycle ride graph. For how long did Priya stop?



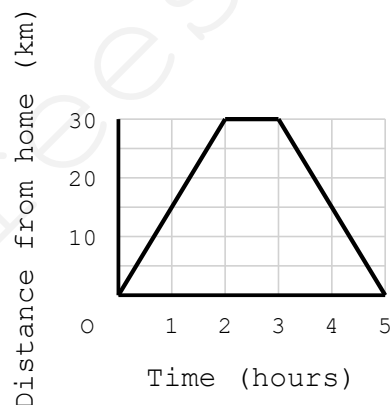
- A. Half an hour
B. 1 hour
C. 1 and a half hours
D. 2 hours
E. 3 hours

Q3. Use the same cycle ride graph. What was Priya's speed on the journey home?



- A. 10 km/h B. 12 km/h C. 15 km/h D. 20 km/h E. 30 km/h

Q4. Use the same cycle ride graph. What was the total distance Priya cycled altogether?

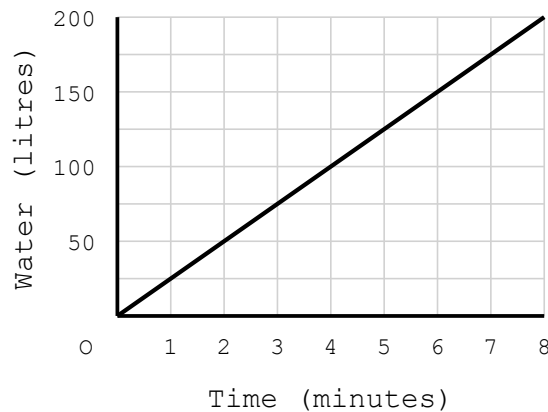


- A. 30 km B. 45 km C. 50 km D. 60 km E. 75 km

Q5. A train travels 150 km in 2 hours, waits at a station for 1 hour, and then travels 90 km in 2 hours. What is its average speed for the whole journey, including the wait?

- A. 40 km/h B. 45 km/h C. 48 km/h D. 50 km/h E. 60 km/h

Q6. The graph shows a tap filling a tank at a steady rate. How long would it take to collect 350 litres at the same rate?



- A. 12 minutes
- B. 14 minutes
- C. 15 minutes
- D. 16 minutes
- E. 18 minutes

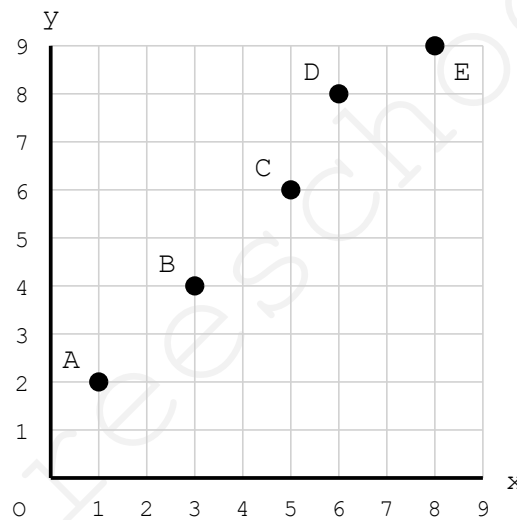
Q7. Water is poured at a steady rate into a vase that is wide at the bottom and narrows towards the top. Which of these describes the graph of the depth of the water against time?

- A. A straight line sloping upwards
- B. A straight horizontal line
- C. A curve that gets steeper and steeper
- D. A curve that gets less and less steep
- E. A curve that goes up and then down

Q8. Which of these would give a graph that is a straight line passing through the origin?

- A. A taxi fare with a fixed charge plus an amount for each mile
- B. The temperature of a room through the day
- C. The value of a car against its age
- D. A child's height against their age
- E. The cost of petrol against the number of litres bought

Q9. Five points are plotted on the grid. Four of them lie on one straight line. Which point does NOT?



- A. A
- B. B
- C. C
- D. D
- E. E

Q10. A shop draws a graph of its monthly sales but starts the vertical axis at 200 rather than at 0. What is the effect?

- A. The differences between the months look bigger than they really are
- B. The differences between the months look smaller than they really are
- C. The sales figures themselves are changed
- D. The graph becomes a straight line
- E. It makes no difference at all

Q11. On the graph of $y = x^2$, the value of x is doubled from 3 to 6. What happens to the value of y ?

- A. It stays the same
- B. It doubles
- C. It is 3 times bigger
- D. It is 4 times bigger
- E. It is 9 times bigger

Q12. A conversion graph is drawn for changing kilograms into pounds, using the rule that 5 kg is 11 pounds. The graph only goes up to 10 kg. Using the same rate, how many pounds is 25 kg?

- A. 44 pounds B. 50 pounds C. 55 pounds D. 60 pounds E. 66 pounds

Q13. On a distance-time graph, one journey is drawn as a steeper line than another. What does that tell you?

- A. It was a faster journey
- B. It was a slower journey
- C. It was a longer journey in time
- D. The traveller stopped more often
- E. The traveller went backwards

Q14. A phone is charged from empty at a steady rate. After 20 minutes it is 30% charged. How long does it take to reach 75%?

- A. 45 minutes
- B. 50 minutes
- C. 55 minutes
- D. 60 minutes
- E. 75 minutes

Q15. A pattern of points starts at $(2, 1)$, and each new point is 3 further across and 2 further up than the one before. What are the coordinates of the fifth point?

- A. $(11, 7)$ B. $(12, 9)$ C. $(14, 9)$ D. $(15, 10)$ E. $(17, 11)$

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