

Foundation GCSE: Speed, Distance, Time Calculations

Name: _____

Class: _____

Instructions: Answer all questions. Questions are ordered from easiest (1) to hardest (20). Working out should be shown where appropriate.

1. A car travels at an average speed of 40 mph for 2 hours. Calculate the total distance traveled.
2. A train travels 120 miles at a steady speed of 60 mph. How many hours does the journey take?
3. A cyclist rides 15 miles in 1 hour. What is their average speed in mph?
4. A bus travels 150 km in 3 hours. Calculate its average speed in km/h.
5. A plane flies at an average speed of 500 mph for 4.5 hours. Calculate the distance traveled.
6. A delivery driver travels 180 miles at an average speed of 50 mph. How many hours and minutes does the journey take?
7. A runner jogs at an average speed of 8 km/h for 1 hour and 30 minutes. Calculate the distance covered.
8. A walker covers a distance of 12 km at an average speed of 4 km/h. How long does the walk take in minutes?
9. A car completes a journey of 135 miles in 2 hours and 30 minutes. What is the average speed of the car?
10. A train leaves a station and travels 210 miles at an average speed of 70 mph. If it departs at 09:00, at what time does it arrive?
11. A motorist drives for 3 hours at 40 mph and then 2 hours at 60 mph. Calculate the average speed for the entire journey.
12. A commercial jet flies 2400 miles at an average speed of 600 mph. If it departs at 14:15, what time does it land?
13. A runner completes the first 12 km of a race at 8 km/h and the remaining 8 km at 10 km/h. Find the total time taken in hours.
14. A freight train travels 315 km at an average speed of 70 km/h. Express the journey time in hours and minutes.
15. Two cars start from the same point. Car A travels north at 45 mph for 2 hours. Car B travels south at 55 mph for 2 hours. What is the distance between them?
16. A cyclist travels 24 miles at 12 mph and returns along the same route at 8 mph. Calculate the average speed for the round trip.
17. A boat travels 72 km downstream at 18 km/h and returns upstream at 12 km/h. Find the total time taken for the round trip.
18. A driver traveling at 60 mph notices a service station 15 miles away. Due to traffic, speed drops to 40 mph for the final 10 miles. How long does the whole trip take in minutes?
19. A commuter travels 18 miles by train at 45 mph and then walks 2 miles to the office at 4 mph. Calculate the total time taken in minutes.
20. A motorist completes a 240 mile journey. The first 150 miles are driven at 50 mph and the remaining distance at 60 mph. Calculate the average speed for the entire journey.

Answers & Worked Solutions

1. 80 miles : $40 \times 2 = 80$.
2. 2 hours : $120 \div 60 = 2$.
3. 15 mph : $15 \div 1 = 15$.
4. 50 km/h : $150 \div 3 = 50$.
5. 2250 miles : $500 \times 4.5 = 2250$.
6. 3 hours 36 minutes : $180 \div 50 = 3.6$ hours.
7. 12 km : $8 \times 1.5 = 12$.
8. 180 minutes : $12 \div 4 = 3$ hours = 180 minutes.
9. 54 mph : $135 \div 2.5 = 54$.
10. 12 : 00 : $210 \div 70 = 3$ hours; 09 : 00 + 3 hours = 12 : 00.
11. 48 mph : Total distance = $120 + 120 = 240$ miles over 5 hours.
12. 18 : 15 : $2400 \div 600 = 4$ hours; 14 : 15 + 4 hours = 18 : 15.
13. 2.3 hours : $12 \div 8 = 1.5$, $8 \div 10 = 0.8$, total = 2.3 hours.
14. 4 hours 30 minutes : $315 \div 70 = 4.5$ hours.
15. 200 miles : $90 + 110 = 200$ miles apart.
16. 9.6 mph : Total distance 48, total time 5 hours; $48 \div 5 = 9.6$.
17. 10 hours : 4 hours + 6 hours = 10 hours.
18. 30 minutes : 15 mins + 15 mins = 30 minutes.
19. 54 minutes : 24 mins + 30 mins = 54 minutes.
20. 53.3 mph : Total distance 240, total time 4.5 hours; $240 \div 4.5 = 53.3$.