

Speed, Distance and Time

Practice Worksheet (Foundation Tier)

I DO

A train travels 135 miles in 2 hours and 15 minutes.

Work out the average speed in miles per hour.

WE DO

A car travels 105 miles in 2 hours and 30 minutes.

Work out the average speed in miles per hour.

YOU DO 1

A bus travels 84 miles in 1 hour and 45 minutes.

Work out the average speed in miles per hour.

YOU DO 2

A plane travels 450 miles in 1 hour and 12 minutes.

Work out the average speed in miles per hour.

CHALLENGE

A cyclist travels 24 miles at an average speed of 16 mph.

They then travel a further 15 miles at an average speed of 10 mph.

Work out the average speed for the entire journey.

PRACTICE PERFECT

Solve the following speed, distance, and time problems. Show your working.

1) Ryan drives 120 miles in 2 hours 30 minutes.
Work out his average speed.

2) Katie cycles 18 km in 45 minutes. Work out her average speed in km/h.

3) Catherine runs at an average speed of 8 km/h for 1 hour 15 minutes. Work out the distance she runs.

4) Tom drives 130 miles at an average speed of 40 mph. How long does the journey take? Give your answer in hours and minutes.

5) Steve flies a plane 600 miles in 1 hour 12 minutes. Work out his average speed in mph.

6) Mark drives at 50 mph for 2 hours 45 minutes. Work out the distance he travels.

7) John walks 12 km at a speed of 5 km/h. How long does it take him? Give your answer in hours and minutes.

8) Emily and Kate drive 210 miles in 3 hours 30 minutes. Work out their average speed.

9) Rob and Paige travel by train. The train averages 80 mph and takes 1 hour 45 minutes. How far do they travel?

10) Sophie drives 45 miles. The journey takes 50 minutes. Work out her average speed in mph.

11) Sarah and Emma drive 60 miles at 30 mph, then 90 miles at 45 mph. Work out their average speed for the whole journey.

12) Vicky, Poppy, Paul, Zoe, and Keeley take a coach trip. The coach travels 165 miles at an average speed of 50 mph. How long does the trip take? (Hours and minutes).

ANSWERS & WORKED SOLUTIONS

I Do

Step 1: Convert the time into a decimal. 2 hours 15 minutes = 2.25 hours.

Step 2: Use the formula Speed = Distance $\div$ Time.

Step 3: Speed = $135 \div 2.25 = 60$.

Answer: 60 mph

We Do

Step 1: Convert the time into a decimal. 2 hours 30 minutes = 2.5 hours.

Step 2: Use the formula Speed = Distance $\div$ Time.

Step 3: Speed = $105 \div 2.5 = 42$.

Answer: 42 mph

You Do 1

Step 1: 1 hour 45 minutes = 1.75 hours.

Step 2: Speed = $84 \div 1.75 = 48$.

Answer: 48 mph

You Do 2

Step 1: 1 hour 12 minutes = 1.2 hours (since $12/60 = 0.2$).

Step 2: Speed = $450 \div 1.2 = 375$.

Answer: 375 mph

Challenge

Step 1: Find the time for the first part. Time = Distance $\div$ Speed = $24 \div 16 = 1.5$ hours.

Step 2: Find the time for the second part. Time = $15 \div 10 = 1.5$ hours.

Step 3: Find the total distance and total time. Total Distance = $24 + 15 = 39$ miles. Total Time = $1.5 + 1.5 = 3$ hours.

Step 4: Average Speed = Total Distance $\div$ Total Time = $39 \div 3 = 13$.

Answer: 13 mph

Practice Perfect

1) $120 \div 2.5 = 48$ mph

2) $18 \div 0.75 = 24$ km/h

3) $8 \times 1.25 = 10$ km

4) $130 \div 40 = 3.25$ hours = **3 hours 15 minutes**

5) $600 \div 1.2 = 500$ mph

6) $50 \times 2.75 = 137.5$ miles

7) $12 \div 5 = 2.4$ hours = **2 hours 24 minutes**

8) $210 \div 3.5 = 60$ mph

9) $80 \times 1.75 = 140$ miles

10) $45 \div (50/60) = 54$ mph

11) Time 1 = 2hrs. Time 2 = 2hrs. Tot Dist = 150. Tot Time = 4. $150 \div 4 = 37.5$ mph

12) $165 \div 50 = 3.3$ hours = **3 hours 18 minutes**