

## DISTANCE, SPEED AND TIME - PRACTICE QUESTIONS



1.

A car travelled 70 miles in 2 hours.

Work out the car's average speed, in miles per hour.

$$70 \div 2 = 35 \text{ miles per hour}$$

2.

A train travelled from Bristol to London.

The distance from Bristol to London is 120 miles.

The train travelled at an average speed of 40 miles per hour.

How long did the journey take?

$$120 \div 40 = 3 \text{ hours}$$

3.

A long distance runner ran at an average speed of 10 miles per hour for two and a half hours.

How many miles did the runner run?

$$10 \times 2.5 = 25 \text{ miles}$$

4.

A sprinter ran 200 metres in 40 seconds.

Work out the sprinter's average speed, in metres per second.

$$\frac{200}{40} = 5 \text{ metres per second}$$

5.

Scott drove at an average speed of 35 miles per hour for 3 hours.

How many miles did Scott drive?

$$35 \times 3 = 105 \text{ miles}$$

6.

Tori cycled 9 kilometres in 2 hours.

Work out Tori's average speed, in kilometres per hour.

$$\frac{9}{2} = 4.5 \text{ kilometres per hour}$$

7.

A plane travelled at an average speed of 400 miles per hour for three and a half hours.

How many miles did the plane travel?

$$400 \times 3.5 = 1,400 \text{ miles}$$

8.

A car travelled 225 miles at an average speed of 45 kilometres per hour.

How long did the journey take?

$$\frac{225}{45} = 5 \text{ hours}$$

9.

A helicopter travelled at an average speed of 110 miles per hour for an hour and a half.

How many miles did the helicopter travel?

$$110 \times 1.5 = 165 \text{ miles}$$

10.

A boat travelled 34 miles in 8 hours.

What was the boat's average speed?

$$34 \div 8 = 4.25 \text{ miles per hour.}$$

11.

Amy drove at an average speed of 45 miles per hour for 20 minutes.  
How many miles did she drive?

$$20 \text{ minutes} = \frac{1}{3} \text{ hours}$$

$$45 \times \frac{1}{3} = \underline{15 \text{ miles}}$$

12.

Beth cycled at an average speed of 12 kilometres per hour for 90 minutes.  
How many kilometres did she cycle?

$$90 \text{ minutes} = 1.5 \text{ hours}$$

$$12 \times 1.5 = \underline{18 \text{ kilometres}}$$

13.

Craig drove 90,000 metres at an average speed of 45 kilometres per hour.  
How many hours was he driving for?

$$90,000 \text{ m} = 90 \text{ km}$$

$$90 \div 45 = \underline{2 \text{ hours}}$$

14.

David ran 8 kilometres in 50 minutes.  
Work out David's average speed, in metres per second.

$$8 \text{ km} = 8,000 \text{ m}$$

$$50 \text{ minutes} = 3,000 \text{ seconds}$$

$$8,000 \div 3,000 = \underline{2.6 \text{ metres per second}}$$

15.

Evelyn drove 60 kilometres at an average speed of 500 metres per minute.  
How many hours was she driving for?

$$60 \text{ km} = 60,000 \text{ m}$$

$$60,000 \div 500 = 120 \text{ minutes} \\ = \underline{2 \text{ hours}}$$

16.

Farah ran at an average speed of 2.8 metres per second for 30 minutes.  
How many metres did Farah run?

$$30 \text{ minutes} = 1,800 \text{ seconds}$$

$$2.8 \times 1,800 = \underline{5,040 \text{ metres}}$$

17.

Greg drove 18 kilometres in 20 minutes.  
Work out Greg's average speed, in metres per second.

$$18 \text{ km} = 18,000 \text{ m}$$

$$20 \text{ minutes} = 1,200 \text{ seconds}$$

$$18,000 \div 1,200 = \underline{15 \text{ metres per second}}$$

18.

Henrietta drove 3,600 metres in 8 minutes.  
Work out Henrietta's average speed, in kilometres per hour.

$$3,600 \text{ m} = 3.6 \text{ km}$$

$$8 \text{ minutes} = \frac{2}{15} \text{ hours}$$

$$3.6 \div \frac{2}{15} = \underline{27 \text{ kilometres per hour}}$$

19.

Kevin needs to get to work by 9am.

Kevin's workplace is 3 miles away from his house.

He is planning to cycle to work.

He can cycle at a maximum speed of 9 miles per hour.

Kevin says "If I leave my house at 8:45am and cycle as fast as I can, I will arrive on time".

Is Kevin right? Explain your answer.

$$\text{Time} = \frac{3}{9} = \frac{1}{3} \text{ hours} = 20 \text{ minutes} > 15 \text{ minutes}$$

Kevin will not arrive on time, his journey would take 20 minutes.

20.

Esther and Freddie both cycled to school.

Esther lives 1,800 metres from the school.

Freddie lives 3 kilometres from the school.

Esther travelled at an average speed of 4 metres per second, and Freddie travelled at an average speed of 8 metres per second.

They both left their houses at the same time.

Who arrived at school first?

$$\text{Esther: } 1,800 \div 4 = 450 \text{ seconds}$$

$$\text{Freddie: } 3,000 \div 8 = 375 \text{ seconds.}$$

Freddie will arrive first.

21.

Maria walks to work.

She walks at an average speed of 5 kilometres per hour.

She lives 3 kilometres away from her workplace.

She needs to be in work by 9am.

What is the latest time she can leave her house?

$$\text{Time} = \frac{3}{5} \text{ hours} = 36 \text{ minutes}$$

$$9 \text{ am} - 36 \text{ minutes} = \underline{\underline{8:24}}$$

22.

Neil and Martin both drove from Birmingham to Manchester.

Neil left at 1:50 and Martin left at 1:20.

Neil drove at an average speed of 30 miles per hour and Martin drove at an average speed of 25 miles per hour.

The distance from Birmingham to Manchester is 45 miles.

Who arrived in Manchester first?

$$\text{Neil: } \frac{45}{30} = 1.5 \text{ hours} \quad 1:50 + 1.5 \text{ hours} = \underline{3:20}$$

$$\text{Martin: } \frac{45}{25} = 1.8 \text{ hours} \quad 1:20 + 1.8 \text{ hours} = \underline{3:08}$$

Martin arrived first.

23.

Louise and Vanessa both drove the exact same route.

Louise drove at an average speed of 40 miles per hour for 150 minutes.

Vanessa drove at an average speed of 25 miles per hour.

How long did Vanessa drive for?

$$\text{Louise: } 150 \text{ minutes} = 2.5 \text{ hours}$$

$$\text{Distance} = 40 \times 2.5 = 100 \text{ miles.}$$

$$\text{Vanessa: } \text{Distance} = 100 \text{ miles (same as Louise)}$$

$$\text{Speed} = 25 \text{ mph}$$

$$\text{Time} = \frac{100}{25} = \underline{4 \text{ hours.}}$$