

SPEED, DISTANCE AND TIME

[ESTIMATED TIME: 75 minutes]

GCSE

(+ IGCSE) EXAM QUESTION PRACTICE

1.

[3 marks]

Suhail cycles 117 km in 4 hours 30 minutes.
Work out his average speed in km/h.

..... km/h

2.

[3 marks]

Wendy travelled on the Eurostar train from St Pancras station to the Gare du Nord station.
The Eurostar train travelled a distance of 495 km.
The journey time was 2 hours 15 minutes.

Work out the average speed of the Eurostar train in kilometres per hour.

..... km/h

3.

[3 marks]

Omar travelled from Nairobi to Mombasa by train.
The journey took 13 hours 15 minutes.
The average speed was 40 km/h.

Work out the distance from Nairobi to Mombasa.

..... km

4.

[3 marks]

An aeroplane flew from Qatar to Bahrain.
The distance flown was 135 km.
The average speed was 180 km/h.

Work out the time taken.
Give your answer in minutes.

..... minutes

5.

[3 marks]

A plane flew from Frankfurt to Hong Kong.
The flight time was 10 hours 45 minutes.
The average speed was 852 km/h.

Work out the distance the plane flew.

..... km

6.

[3 marks]

The length of Rachael's journey from her home to work is 72 km.
The journey takes 1 hour 20 minutes.

Work out her average speed in km/h.

..... km/h

7.

[3 marks]

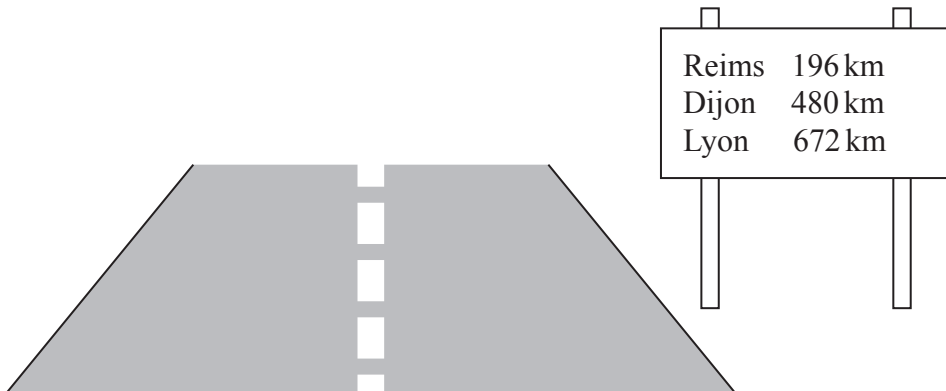
A train travels 165 km.
Its average speed for the journey is 60 km/h.
Work out the time that this journey takes.
Give your answer in hours and minutes.

..... hours minutes

8.

[4 marks]

Emily is driving in France.
She sees this sign.



Emily is going to drive to Dijon.
She plans to drive at an average speed of 50 miles per hour.
Work out how long it should take Emily to drive to Dijon.
Use 5 miles = 8 km.

.....

Here is part of a timetable for the Paris to Montpellier express train service.

Paris	06 07	10 07	12 07	18 07	20 07
Valence	08 22	12 24	14 24	20 24	22 24
Nimes	09 09	13 05	15 05	21 05	23 05
Montpellier	09 37	13 34	15 34	21 34	23 34

The average speed of the 20 07 train from Paris is 224 km/h.

Work out the distance this train travels from Paris to Montpellier.

..... km

Lizzy drove by car to visit her aunt.
She left home at 9 30 am.

Lizzy arrived at her aunt's house at 11 15 am.
She drove a distance of 140 km.

Work out, in km/h, Lizzy's average speed for the journey.

..... km/h

Sean drives from Manchester to Gretna Green.

He drives at an average speed of 50 mph for the first 3 hours of his journey.

He then has 150 miles to drive to get to Gretna Green.

Sean drives these 150 miles at an average speed of 30 mph.

Sean says,

“My average speed from Manchester to Gretna Green was 40 mph.”

Is Sean right?

You must show how you get your answer.

The distance from Fulbeck to Ganby is 10 miles.

The distance from Ganby to Horton is 18 miles.



Raksha is going to drive from Fulbeck to Ganby.

Then she will drive from Ganby to Horton.

Raksha leaves Fulbeck at 10 00

She drives from Fulbeck to Ganby at an average speed of 40mph.

Raksha wants to get to Horton at 10 35

Work out the average speed Raksha must drive at from Ganby to Horton.

..... mph

David drives to the supermarket on his way home from work.

David leaves the supermarket at 1810

He drives 20 miles to his home.

The speed limit for the journey is 30 mph.

David drives within the speed limit.

Can David get home before 1900?

Give reasons for your answer.

14.

[3 marks]

Regan cycles 78 miles in 6 hours.

His average speed for the first 30 miles is 15 miles per hour.

Work out Regan's average speed for the last 48 miles.

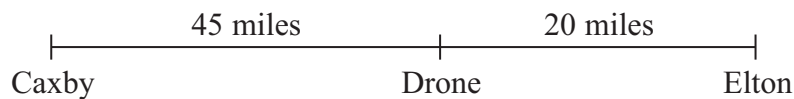
..... mph

15.

[3 marks]

The distance from Caxby to Drone is 45 miles.

The distance from Drone to Elton is 20 miles.



Colin drives from Caxby to Drone.

Then he drives from Drone to Elton.

Colin drives from Caxby to Drone at an average speed of 30 mph.

He drives from Drone to Elton at an average speed of 40 mph.

Work out Colin's average speed for the whole journey from Caxby to Elton.

..... mph

Sue is driving home from her friend's house.

Sue drives:

10 miles from her friend's house to the motorway

240 miles on the motorway

5 miles from the motorway to her home

Sue:

takes 20 minutes to drive from her friend's house to the motorway

drives at an average speed of 60 mph on the motorway

takes 25 minutes to drive from the motorway to her home

Sue stops for a 30 minute rest on her drive home.

Sue leaves her friend's house at 9.00 am.

What time does Sue get home?

You must show all your working.

James and Peter cycled along the same 50 km route.

James took $2\frac{1}{2}$ hours to cycle the 50 km.

Peter started to cycle 5 minutes after James started to cycle.

Peter caught up with James when they had both cycled 15 km.

James and Peter both cycled at constant speeds.

Work out Peter's speed.

..... km/h

Harry travels from Appleton to Brockley at an average speed of 50 mph.

He then travels from Brockley to Cantham at an average speed of 70 mph.

Harry takes a total time of 5 hours to travel from Appleton to Cantham.

The distance from Brockley to Cantham is 210 miles.

Calculate Harry's average speed for the total distance travelled from Appleton to Cantham.

..... mph

19.

[3 marks]

An object is travelling at a speed of 2650 metres per second.

How many seconds will the object take to travel a distance of 3.45×10^{10} metres?

Give your answer in standard form, correct to 2 significant figures.

..... seconds

20.

[4 marks]

Steve travelled from Ashton to Barnfield.

He travelled 235 miles, correct to the nearest 5 miles.

The journey took him 200 minutes, correct to the nearest 5 minutes.

Calculate the lower bound for the average speed of the journey.

Give your answer in miles per hour, correct to 3 significant figures.

You must show all your working.

..... mph

21.

[3 marks]

A spacecraft travels from Earth to Mars at an average speed of 13 km/s.

The spacecraft travels a distance of 1.4×10^8 miles.

Calculate the number of days the spacecraft takes to travel from Earth to Mars.

Use

1 mile = 1.6 km

1 km/s = 2250 miles per hour

..... days

22.

[5 marks]

The world speed record for a train is 360 mph.

It takes Malcolm 6 seconds to drive a train 1 kilometre.

Has the train broken the world speed record?

Use 5 miles = 8 km.

You must show how you get your answer.

23.

[5 marks]

A road is 4530 m long, correct to the nearest 10 metres.

Kirsty drove along the road in 205 seconds, correct to the nearest 5 seconds.

The average speed limit for the road is 80 km/h.

Could Kirsty's average speed have been greater than 80 km/h?

You must show your working.

24.

[3 marks]

A plane flew from Bogotá to Quito.

The distance the plane flew was 725 km.

The time taken by the plane was 1 hour 24 minutes.

Work out the average speed of the plane.

Give your answer correct to 3 significant figures.

..... km/h