

## Distance, time & speed

Name & Set

1 How many seconds

(i) are there in one minute? \_\_\_\_\_  
\_\_\_\_\_ [1]

(ii) are there in one hour? \_\_\_\_\_  
\_\_\_\_\_ [1]

(iii) are there in one day? \_\_\_\_\_  
\_\_\_\_\_ [1]

(iv) are there in one week? \_\_\_\_\_  
\_\_\_\_\_ [1]

(v) are there in one year? \_\_\_\_\_  
\_\_\_\_\_ [1]

(vi) are there in this lesson? \_\_\_\_\_  
\_\_\_\_\_ [1]

(vii) do you spend at school each week? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

(viii) until the end of the year? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

(ix) since term started? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

(x) old are you? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [1]

When answering (viii) & (ix) you must give the time and date when you made the calculation.

2 How many metres are there in

(i) one kilometre? \_\_\_\_\_  
\_\_\_\_\_ [1]

(ii) 1.75 km? \_\_\_\_\_  
\_\_\_\_\_ [1]

(iii) three and a half kilometres? \_\_\_\_\_  
\_\_\_\_\_ [1]

(iv) 155 km? \_\_\_\_\_  
\_\_\_\_\_ [1]

3 How many kilometres are

(i) 500 m? \_\_\_\_\_  
\_\_\_\_\_ [1]

(ii) 7,500 m? \_\_\_\_\_  
\_\_\_\_\_ [1]

(iii) 60 m? \_\_\_\_\_  
\_\_\_\_\_ [1]

(iv) a million metres? \_\_\_\_\_  
\_\_\_\_\_ [1]

4 Someone walks 1.5 km in 25 minutes.

(a) What is 1.5 km in metres? \_\_\_\_\_ [1]

(b) How many seconds in 25 minutes? \_\_\_\_\_ [1]

(c) Use the answers to (a) & (b) to calculate this person's average speed.

\_\_\_\_\_  
\_\_\_\_\_ [3]

5 A sprinter runs 100 metres in 12.5 seconds. Calculate the sprinter's average speed in m/s.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_ [3]

6 How long will it take someone to travel a distance of 5 km at an average speed of 40 km/hr?  
Give the answer in hours.

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[3]

7 A car takes half an hour to complete a journey at an average speed of 90 km/hr. How many kilometres does the car travel in this time?

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[3]

8 You are on a long journey by car to an unfamiliar destination. Some while after setting off you ask the driver "How long before we get there?" The driver looks at the speedometer and says, "We're doing 120 kilometres per hour." She thinks for a moment and answers, "If we keep this speed up, we should be there in 40 minutes."

(a) How far are you from your destination? Give your answer in kilometres.

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[3]

(b) In fact it takes 1 hour and 15 minutes to get there. What is the average speed of the car over this distance? Give the answer in kilometres per hour.

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[3]

9 Collect data that will enable you to work out the average speed at which you travel to or from school.

(a) List the different methods of transport in the order that you use them in your journey from home to school (i.e. foot, cycle, car, bus or train)

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[2]

(b) Distance between home and school (trace out your route on a map and use the scale of the map to calculate the distance in metres. Include a copy of the map in with this worksheet.)

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[2]

(c) Total journey time in seconds

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[2]

(c) Your average speed in metres per second

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[2]

9 The table below gives distances between some places in Britain in kilometres.

	London	Cambridge	Dover	Edinburgh	John O'Groats	Land's End
Cambridge	90					
Dover	120	200				
Edinburgh	600	540	720			
John O'Groats	1100	1000	1200	450		
Land's End	480	540	540	950	1400	
Leeds	270	240	420	330	780	620

(a) What is the distance of (i) the shortest and (ii) the longest journey possible between these places? Give the names of the places as well as the distance between them.

(i) shortest distance \_\_\_\_\_ [2]

(ii) longest distance \_\_\_\_\_ [2]

(b) A car completes the journey from Cambridge to Leeds in 4 hours. Calculate the car's average speed.

\_\_\_\_\_ [3]

(c) Calculate the speed at which one must drive to complete a journey between London and Dover in 1.5 hours. Answer in km/hr.

\_\_\_\_\_ [3]

(d) How long does the journey from Edinburgh to John O'Groats take at an average speed of 50 kph? Give your answer in hours.

\_\_\_\_\_ [3]

(e) Simon decides to drive from Edinburgh to London via Leeds. The journey from Edinburgh to Leeds takes him 3 hours.

(i) What was Simon's average speed between Edinburgh and Leeds?

\_\_\_\_\_ [3]

(ii) Simon stops at Leeds for two hours and then drives to London at an average speed of 90 km/hr. How long did it take him to reach London from Leeds?

\_\_\_\_\_ [3]

(iii) What was Simon's average speed between Edinburgh to London?

\_\_\_\_\_ [2]