

Compound Measures

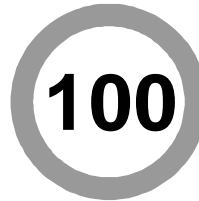
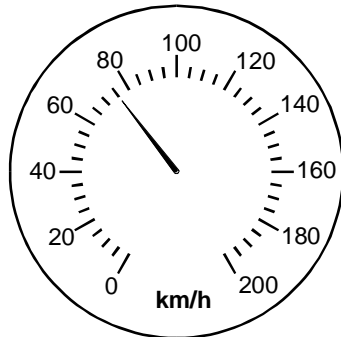
1. Jan cycles at 10 mph.

Convert this speed to km/h.

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.....

Answer km/h
(Total 2 marks)

2. A speed limit in France is 100 kilometres per hour.
The speedometer shows the speed of a lorry.



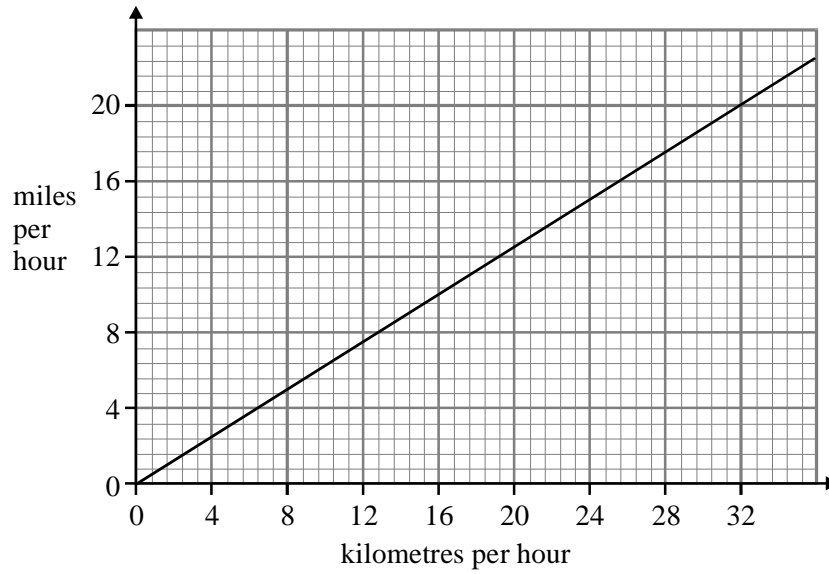
- (a) How much slower than the speed limit is the lorry travelling?

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Answer km/h

(2)

(b) (i) Use the graph to convert 32 kilometres per hour into miles per hour.



Answer miles per hour

(1)

(ii) Convert 96 kilometres per hour into miles per hour.

.....

Answer miles per hour

(2)

(Total 5 marks)

3. Dave drives 15 miles to work.
 The journey takes 20 minutes.

What is Dave's average speed in miles per hour?

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Answer mph

(Total 3 marks)

4. Sue drives a distance of 11 miles.

She drives for $\frac{1}{4}$ of an hour.

Calculate Sue's average speed.
Give your answer in miles per hour.

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.....

Answer miles per hour
(Total 2 marks)

5. Brian travels 150 miles in 3 hours.
Clive travels 110 miles in 2 hours.

Who is travelling faster?
You **must** show all your working.

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.....
.....

(Total 3 marks)

6. Here is part of a railway timetable.

Departure Times				
Newcastle	0840	0935	1040	1122
York	0943	1034	1144	1225
Leeds	1010	–	1210	–
Derby	1124	1157	1324	1355
Birmingham	1215	1315	1415	1515

(a) A train leaves Newcastle at 1040.

How long is the journey to Birmingham for this train?
Give your answer in hours and minutes.

.....

Answer hours..... minutes

(3)

(b) The 1225 train from York takes 1 hour 30 minutes to reach Derby.
The distance from York to Derby is 96 miles.

Calculate the average speed of the train in miles per hour.

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Answer mph

(3)

(Total 6 marks)

7. In a training session Ben runs 10 km around a 400 m track.

(a) How many 400 m laps does Ben complete?

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.....
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Answer

(3)

(b) On average Ben completes each 400 m lap in 80 seconds.
Calculate Ben's average speed in metres per second.

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Answer m/s

(2)

(c) What is the total time that Ben takes to complete the 10 km training session?
Give your answer in minutes and seconds.

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Answer minutes seconds

(3)

(Total 8 marks)

8. Harry drives 182 miles.
His average speed is 35 miles per hour.

How long does the journey take? Give your answer in hours and minutes.

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.....

Answer hours minutes
(Total 4 marks)

9. Charles drove 132 miles at an average speed of 55 mph.
Calculate the time taken for this journey.

Give your answer in hours and minutes.

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.....

Answer hours minutes
(Total 4 marks)

10. Susan completes a journey in two stages.
In stage 1 of her journey, she drives at an average speed of 80 km/h and takes 1 hour 45 minutes.

(a) How far does Susan travel in stage 1 of her journey?

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.....

Answer km
(2)

(b) Altogether, Susan drives 190 km and takes a total time of 2 hours 15 minutes.
What is her average speed, in km/h, in **stage 2** of her journey?

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.....

Answer km/h
(2)
(Total 4 marks)

11. (a) An athlete runs 15 miles at an average speed of 6 miles per hour.

How long does he take to run the 15 miles?
Give your answer in hours and minutes.

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.....

Answer hours minutes

(3)

(b) Another athlete runs 18 miles in $2\frac{1}{4}$ hours.

What is her average speed?

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.....
.....

Answer

(3)

(Total 6 marks)

12. A metal bar has a volume of 250 cm^3 .
It has a mass of 1.7 kg.
Calculate the density of the metal. State the units of your answer.

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Answer

(Total 3 marks)