Section A   Reading Scales   Grade G / F

1. Write down the value of each number indicated by an arrow.

(a)
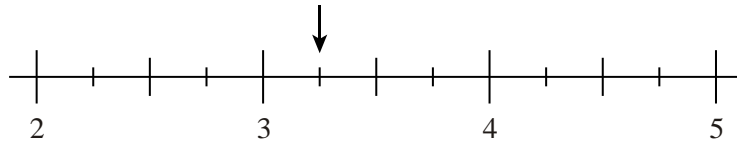
Answer ……………………………………………………..

(1)

(b)
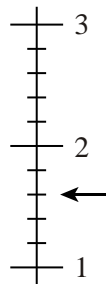
Answer ……………………………………………………..

(1)

(c)
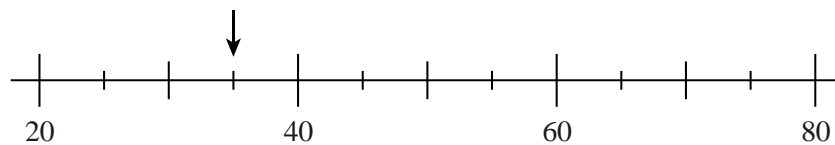
Answer ……………………………………………………..

(1)
(Total 3 marks)

2. Give the values shown by the arrows on these scales,

(a)
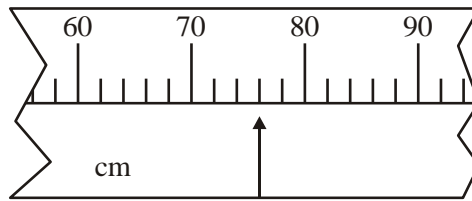
Answer .... cm

(1)

(b)
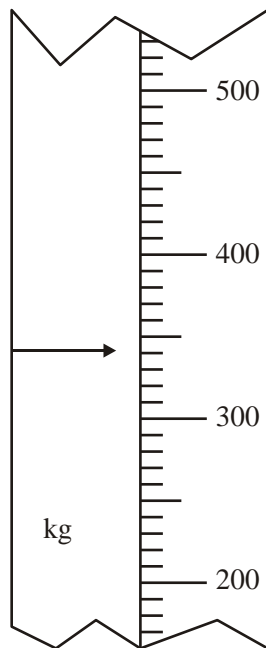
Answer .... kg

(1)

(c)
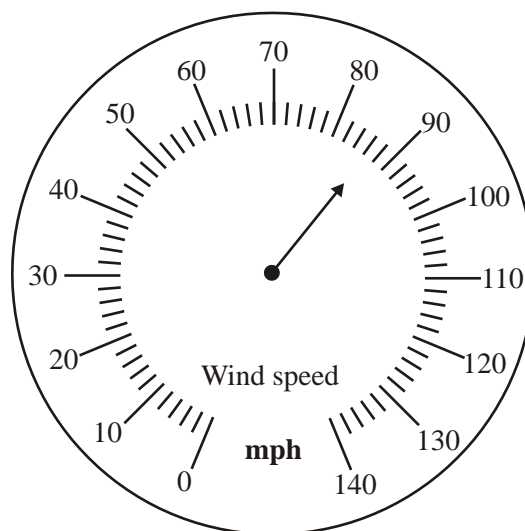
Answer .... mph

(1)(Total 3 marks)

3. (a) The arrow shows the speed of a car.
The speed limit is 50 mph.

How much below the speed limit is the speed of the car?

…………………………………………………………………………………….

…………………………………………………………………………………….
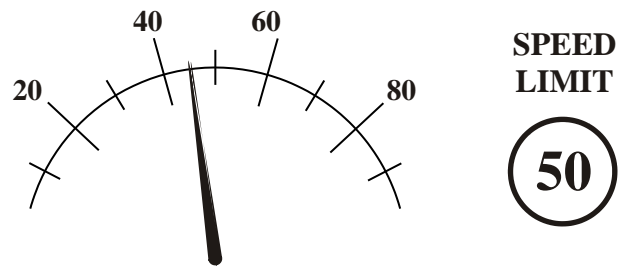
Answer ………………………………………………… mph

(2)

(b) Write down the value shown by the arrow on this scale.
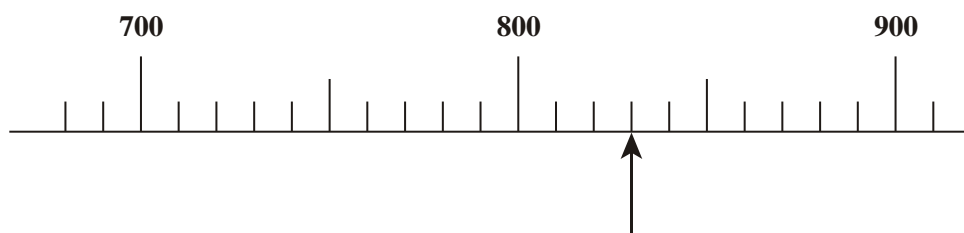
Answer ……………………………………………………

(1)
(Total 3 marks)

4. (a) Part of a scale is shown in the diagram below. It measures weight in grams.
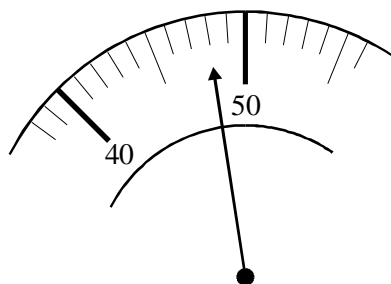
Write down the weight shown by the arrow.

Answer .... grams

(1)

(b)   The scale below measures volume in centilitres.

```
20 ──
     ─
     ─
     ─
     ─
10 ──
```
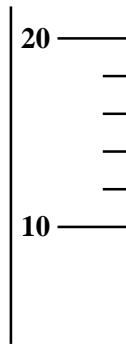
Put an arrow against the point on this scale which shows 14 centilitres.

(1)
(Total 2 marks)

5.   (a)

Nail

```
0   1   2   3   4   5   6 │ 7   8   9   10
                  cm
```
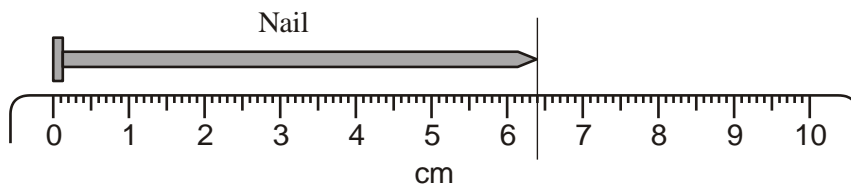
How long is the nail?

Answer .... cm

(1)

(b)

```
├───┼───┼───┼───┼───┼───┼───┼───┼───┤
200             300             400
```
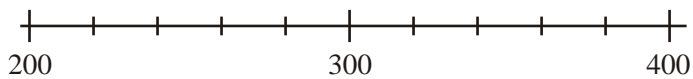
On this number line, mark the position of 270.

(1)
(Total 2 marks)

6. The diagram shows a weighing scale.
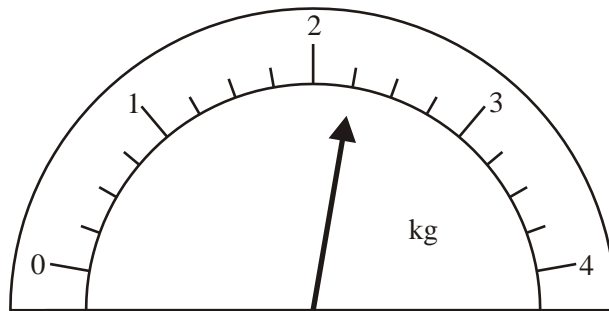
(a) Put a circle around the correct reading.

$$2\frac{1}{10} \quad 2\frac{1}{5} \quad 2\frac{1}{4} \quad 2\frac{1}{2} \quad 2\frac{3}{4}$$

(1)

(b) Write your answer to part (a) as a decimal.

Answer ....

(1)

(c) The weight increases by 1 kg.

Mark the new position of the arrow on the diagram.

(1)
(Total 3 marks)

Success:	Target:
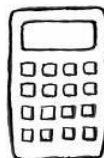
Section B   Converting Metric Units   Grade G

1. Which metric unit would you use to measure the following?

   (a) The length of a pencil

   Answer …………………………………………………

   (1)

   (b) The amount of petrol in a car's tank

   Answer …………………………………………………

   (1)

   (c) The area of a football pitch

   Answer …………………………………………………

   (1)

   (d) The weight of a bus

   Answer …………………………………………………

   (1)
   (Total 4 marks)

2. (a) Write down the length of this stick.
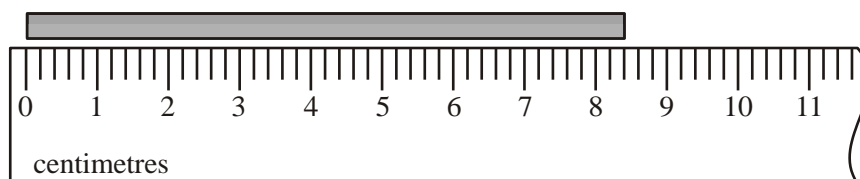
   Answer .... cm

   (1)

   (b) Tom has a toy car.
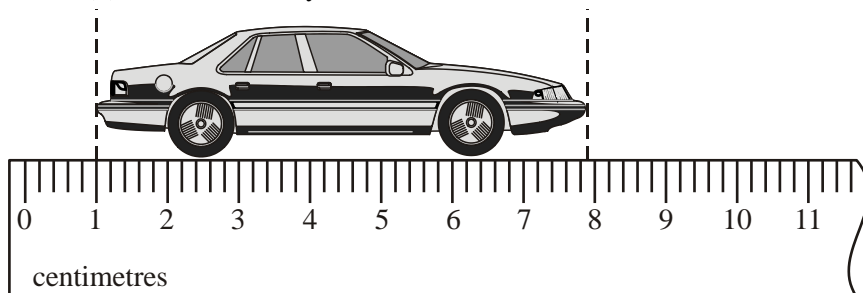
   What is its length in **millimetres**?

   ....

   Answer .... millimetres

   (2)
   (Total 3 marks)

3.   (a)   What value is shown by the pointer in each of these diagrams?

(i)

Answer .... grams

(1)

(ii)
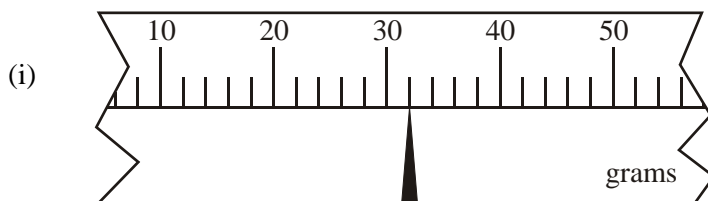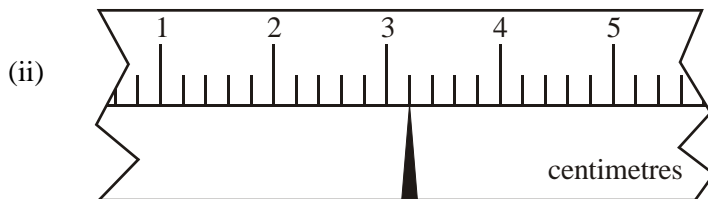
Answer .... centimetres

(1)

(b)   Write your answer to part (a)(ii) in millimetres.

....

Answer .... millimetres

(1)
(Total 3 marks)

4.   A postman has four parcels to deliver.
One parcel weighs 3.75 kilograms.
Three parcels weigh 500 grams each.
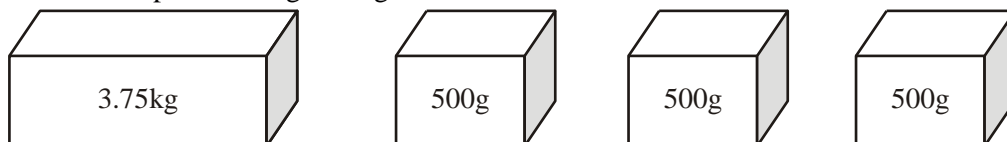
Calculate the total weight of the parcels.
Give your answer in kilograms.

....

....

....

....

Answer .... kg

(Total 3 marks)

5. (a) Convert 5 metres into centimetres.

....

Answer .... cm

(1)

(b) The diagram shows a rectangle.

5 cm

5 m

Not to scale
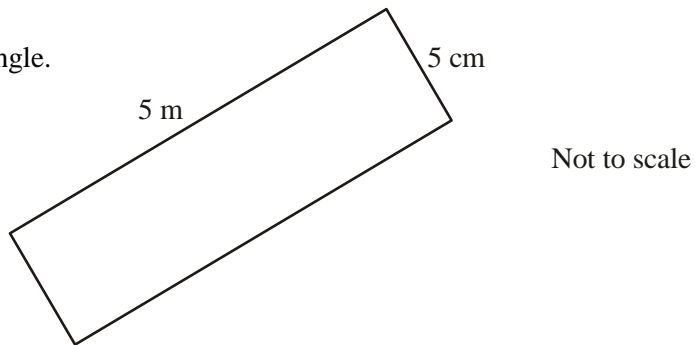
Work out the perimeter. Give your Answer in centimetres.

....

....

Answer .... cm

(2)(Total 3 marks)

6. The diagram shows a weighing scale.
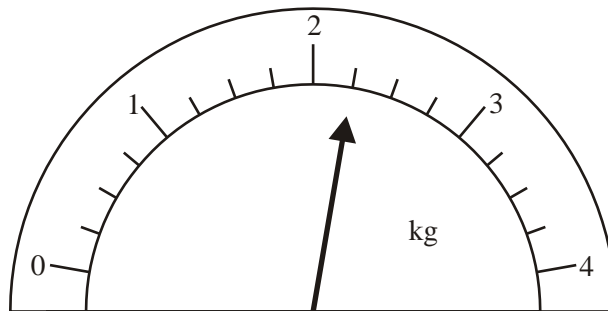
Convert $5\frac{1}{4}$ kilograms into grams.

....

Answer ....grams

(Total 2 marks)

7. Videos are stored on shelves. Each video is 25 mm wide. Each shelf is 90 cm long.

How many videos can be stored on 5 shelves?

....

....

....

....

Answer ....

(Total 3 marks)

8. The weight of a 2p coin is 7g.
Find the weight of £10 worth of 2p coins.
Give your Answer in kilograms.

....

....

....

....

....

Answer ....kilograms

(Total 4 marks)

9. A bottle contains 2 litres of water. 1 litre = 1000 cm^3
The water is shared equally into 10 identical cups.

Each cup is $\frac{2}{3}$ full.

2 litres
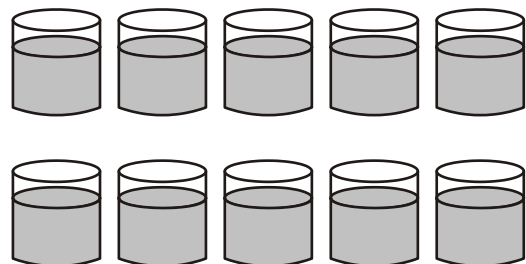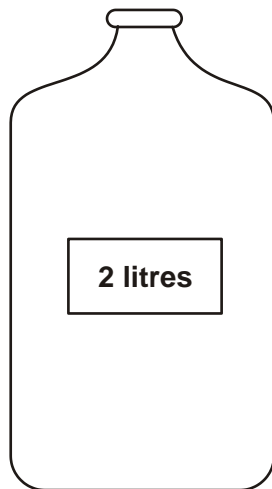
How much will a cup hold when it is full?
Give your answer in cm^3. You **must** show your working.

....

....

....

....

....

....

Answer …………………………………....... cm^3

(Total 4 marks)

Success:	Target:
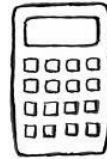
Section C   Converting Metric and Imperial Units   Grade F / E

1.   Tick the correct boxes to say whether the following statements are true or false.

                                                            True   False

    (a)   1 pound is approximately 450 grams.

    (b)   1 foot is approximately 15 centimetres.

    (c)   1 mile is approximately 1.6 kilometres.

                                                            (Total 3 marks)

2.   This scale shows pints and litres.
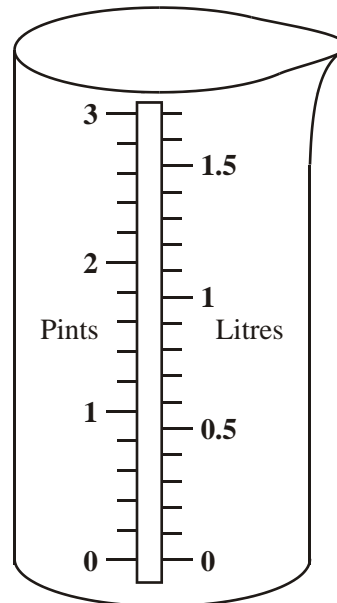
    (a)   Draw an arrow on the scale to show 2.5 pints.

                                                                            (1)

    (b)   Use the scale to estimate how many pints are in 1 litre.

        ....

                        Answer .... pints
                                                                            (1)

    (c)   Estimate the number of litres in 8 pints.

        ....

        ....

        ....

                        Answer .... litres
                                                                            (2)
                                                                    (Total 4 marks)

3. (a) Convert 5 litres to pints.

....

....

....

Answer .... pints

(2)

(b) Convert 7 pounds to kilograms.

....

....

Answer .... kg

(2)

(Total 4 marks)

4. Here is a conversion table for litres and pints.

Litres	Pints
1	1.75
5	8.75
10	17.5
20	35

(a) Use the table to convert 100 litres to pints.

....

Answer ....pints

(1)

(b) Use the table to convert 21 litres to pints.

....

....

....

Answer ....pints

(2)

(Total 3 marks)

5. The table shows the conversion between gallons and litres.

$$1 \text{ gallon} = 4.55 \text{ litres}$$

(a) Convert 8 gallons to litres.

....

....

Answer .... litres

(2)

(b) Convert 40 litres to gallons.

....

....

Answer .... gallons

(2)
(Total 4 marks)

6. Change $3\frac{1}{2}$ kilograms into pounds.
Give your answer to the nearest pound.

....

....

Answer .... pounds
(Total 2 marks)

7. Use the following conversions to change 2 tonnes into pounds (lb).

$$1 \text{ tonne} = 1000 \text{ kg}$$
$$1 \text{ kg} = 2.205 \text{ pounds (lb)}$$

....

....

....

....

....

Answer .... pounds (lb)
(Total 3 marks)

8. You are given that   1 litre = 1.76 pints   and   1 gallon = 8 pints

Convert 25 litres to gallons. Show your working.

....

....

....

Answer ………………………………………………… gallons

(Total 3 marks)

9. Dilip has a space in his living room which is $2\frac{1}{2}$ feet wide.

He has a bookcase which is 80 cm wide.

Will the bookcase fit into the space? You **must** show your working.

....

....

....

....

(Total 3 marks)

10. Petrol costs 88p per litre.

Calculate the price of 1 gallon of petrol.
Use the conversion   1 gallon = 4.5 litres.

....

....

....

Answer £..

(Total 2 marks)

11. Apples are sold in a farm shop at £1.76 per kilogram.

Calculate the price of 1 pound of apples. Use the conversion 1 kilogram = 2.2 pounds

....

....

Answer ....

(Total 3 marks)

Success:	Target:

Teacher Assessment		
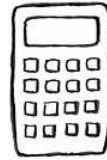
Section D	**Time**	**Grade D / C**

1. Part of a railway timetable is shown.

London Waterloo	1630	1645	1715	1745	1830	1850
Southampton	1739	1810	1825	1859	1940	2018
Bournemouth	1812	1831	1856	1929	2011	2101
Poole	1825	1905	1907	1942	2023	2116
Weymouth	1913	–	1953	2028	2111	–

Sari arrives at London Waterloo at 1720.
She catches the next train from London Waterloo to Bournemouth.

How long does the journey take?

....

....

....

....

Answer .... hour .... minutes

(Total 3 marks)

2. Henry arrives at Fareham station at 9.30 am. He catches the first train to Newport.

This train is on time throughout the whole of its journey. How long is the train journey to Newport?

Portsmouth Harbour	dep	0600	0708		0824	0924		1024	1124		1224		1324
Portsmouth & Southsea	dep	0604	0712		0828	0928		1028	1128		1228		1328
Cosham	dep	0614	0722		0839	0939		1039	1139		1239		1339
Fareham	dep	0624	0730		0847	0947	1006	1047	1147		1247		1347
London Waterloo	dep									1217			
Southampton Central	dep	0652	0754	0809	0909	1009	1033	1109	1209		1309	1319	1409
Romsey	dep	0703	0805	0834	0920	1020	1044	1120	1120		1320	1344	1420
Dunbridge	dep		0810	0840			1049				1350		
Dean	dep		0815	0846							1356		
Salisbury	arr	0721	0828	0859	0940	1040	1104	1140	1140		1340	1409	1440

Salisbury	dep	0723	0830	0908	0940	1040	1107	1140	1240		1340	1410	1440
Warminster	dep	0743	0850	0928	1000	1100	1127	1200	1300	1354	1400	1430	1500
Westbury	arr	0751	0856	0936			1133	1206	1306		1406	1438	
Westbury	dep	0756	0858	0937			1136	1207	1307		1407	1439	
Trowbridge	dep	0802	0904	0943	1011	1111	1142		1313	1405		1445	1511
Bradford-on-Avon	dep	0808	0910	0949			1148			1411		1451	
Bath Spa	dep	0824	0922	1002	1027	1127	1204	1228	1328	1423	1428	1512	1528
Bristol Temple Meads	arr	0842	0940	1020	1045	1145	1222	1245	1345	1441	1445	1530	1545
Newport	arr	1020	1119		1219	1319		1444	1519	1513	1624		1722
Cardiff Central	arr	1037	1135		1235	1338		1502	1537	1529	1639		1739

.................................………………………………………………………………………

.................................………………………………………………………………………

.................................………………………………………………………………………

.................................………………………………………………………………………

.................................………………………………………………………………………

Answer ....………..................

(Total 4 marks)

3. Anthony wants to travel from Liverpool to London by train.

He obtains the following timetable from the internet.

Liverpool Lime Street	09:24	10:24	11:24
Crewe	10:15	11:15	12:15
Nuneaton	10:59		12:59
London Euston	12:26	13:19	14:26

Assume that all the trains will keep to their correct times

(a) Anthony needs to arrive at London Euston by 14:00

(i) Which is the latest train that he can take from Liverpool Lime Street?

Answer ....

(1)

(ii) How long will this train take to travel from Liverpool Lime Street to Crewe?

....

....

....

Answer .... minutes

(2)

(b) Anthony notices that one of the boxes in the timetable is empty.

Explain why this box is empty.

....

....

(1)
(Total 4 marks)

4. (a) Jake earns £4 an hour for a basic 35 hour week.
He earns £6 an hour for overtime.
One week he works the basic 35 hour week and 2 hours overtime.

How much does he earn altogether?

....

....

....

....

....

Answer £ ....

(4)

(b) One morning, Jake works from 0815 to 1210.

How long does he work? Give your answer in hours and minutes.

....

....

Answer .... hours .... minutes

(2)
(Total 6 marks)

5. Tom works from 1.45 pm to 5.30 pm every weekday. How long does Tom work each day?

....

....

....

Answer .... hours …………… minutes

(Total 2 marks)

6. An aeroplane left Manchester airport at 8.35 am and flew to Lisbon.
The local time in Manchester and in Lisbon is the same. The flight took 2 hours 40 minutes.

What was the time when the aeroplane arrived in Lisbon?

....

Answer ....

(Total 2 marks)

7.   A 24-hour digital clock shows the time at twenty-three minutes past seven in the morning.

(a)   Fill in the clock below to show the time at twenty-three minutes past seven in the evening.

(1)

(b)   A plane flies from London to Lisbon. The plane leaves London at 07 23 and arrives in
Lisbon at 09 22.
How long is the flight? Give your answer in hours and minutes.

…………............…............……..……................……………………………………

…………............…............……..……................……………………………………

Answer .... hours ……………… minutes

(1) (Total 2 marks)

8.   The times of some early evening television programmes are shown.

5: 10	Blue Peter
5: 35	Neighbours
6: 00	News

Neighbours is shown twice a day, five days a week.
All programmes of Neighbours are the same length.

For how many hours and minutes is Neighbours shown each week?

....

....

....

Answer .... hours .... minutes

(Total 2 marks)

9. The table shows the playing times for some music tracks.

	Minutes	**Seconds**
Track A	3	45
Track B	2	59
Track C	3	35
Track D	2	54

(a) Which track has the longest playing time?

Answer ....

(1)

(b) Which track has the shortest playing time?

Answer ....

(1)

(c) What is the total playing time for tracks A and B?

....

....

....

Answer .... minutes .... seconds

(2)

(d) Write down the playing time of Track C to the nearest minute.

Answer ....minutes

(1)
(Total 5 marks)

10. Amina arrived home one afternoon and the clock showed the time as half past two.
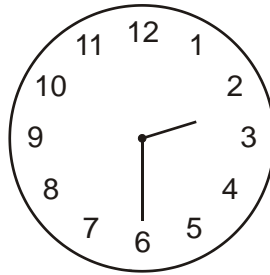
Her father told her that the clock was seven minutes fast.

What was the correct time when Amina arrived home?
Give your answer using the 24-hour clock notation.

....

....

....

Answer ....
(Total 3 marks)

Success:	Target:
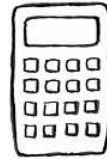
Section E	Speed	Grade D / C

1. Sharon travels from Leeds to London in her car. The distance she travels is 200 miles. The journey takes her 4 hours. Find Sharon's average speed.

....

....

....

Answer ....

(Total 3 marks)

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

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

....

....

....

....

....

....

(Total 3 marks)

3. A snail travels 80 metres in 20 hours.

Find the average speed of the snail in

(a) metres per hour

…………………………………………………………………………………

…………………………………………………………………………………

…………………………………………………………………………………

Answer ………………………………… metres per hour

(2)

(b) metres per day.

…………………………………………………………………………………

…………………………………………………………………………………

Answer ………………………………… metres per day

(2)

(Total 4 marks)

4. Kristen drives 252 miles from Redcar to London in 4 hours and 30 minutes.

Calculate her average speed in miles per hour.

....

....

....

....

Answer ....mph

(Total 3 marks)

5. 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.

....

....

....

Answer .... miles per hour

(Total 2 marks)

6. Alan drove 12 miles. The journey took 15 minutes.

What was Alan's average speed?

....

....

....

....

Answer ....

(Total 4 marks)

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

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

....

....

....

....

Answer .... mph

(Total 3 marks)

8.   Charles drove 132 miles at an average speed of 55 mph.Calculate the time taken for this journey.
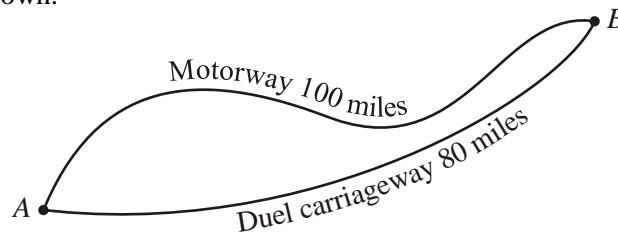
Give your answer in hours and minutes.

....

....

....

....

....

Answer .... hours .... minutes

(Total 4 marks)

9.   Two towns, *A* and *B*, are connected by a motorway of length 100 miles and a dual carriageway of length 80 miles as shown.

Jack travels from *A* to *B* along the motorway at an average speed of 60 mph.
Fred travels from *A* to *B* along the dual carriageway at an average speed of 50 mph.
What is the difference in time between the two journeys?
Give your answer in minutes.

....

....

....

....

Answer .... minutes

(Total 4 marks)

10.   A car produces 2.78 kg of carbon dioxide per hour when driven in a city.
The car travels 30 miles in a city at an average speed of 20 mph.
How much carbon dioxide does the car produce during its journey?

....

....

....

....

....

Answer .... kg

(Total 3 marks)

11. 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?

...............…………………………………………………………………………..

...............…………………………………………………………………………..

...............…………………………………………………………………………..

...............…………………………………………………………………………..

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?

...............…………………………………………………………………………..

...............…………………………………………………………………………..

...............…………………………………………………………………………..

...............…………………………………………………………………………..

...............…………………………………………………………………………..

...............…………………………………………………………………………..

Answer .... km/h

(2)
(Total 4 marks)

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

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

....

....

....

....

....

....

Answer ....

(3)

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

....

....

....

....

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.

....

....

....

....

....

....

Answer .... minutes .... seconds

(3)(Total 8 marks)

Success:	Target: