Chhetri Academy

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GCSE MATHS

Number

Edexcel 1MA1 | Subtopic collection Topic 01

Place value, ordering and order of operations

Foundation tier

Past paper question booklet

575	2010-2025	Foundation
question groups	available papers	tier

Before you begin

1. Show working and use units where appropriate.
2. Use extra paper if you need more space.
3. Print at actual size (100%) for measurement questions.

Name _____ **Date** _____

Whole questions are retained for context; some parts cover other points. Legacy sources are labelled.

2 The table gives information about the prices and the features of five mobile phones.

The ticks (✓) in the table show the features of each phone.

		Feature			
Mobile phone	**Price**	Camera	MP3	FM Radio	Video
Astra	£24.97	✓			
Crystal	£24.97	✓			✓
Pixar	£39.97	✓	✓	✓	
Spark	£34.23	✓		✓	✓
Tacco	£34.97	✓	✓	✓	✓

(a) Which of the five mobile phones is the most expensive?

.....

(1)

(b) Which of the mobile phones have MP3?

.....

(1)

(c) Which mobile phone has Video but **not** FM Radio?

.....

(1)

Mirza has a monthly plan for his mobile phone.
Each month, he pays a total of £9.79 plus the cost of any extra minutes.

Monthly Plan

For **£9.79** per month you get:

100 minutes and unlimited texts.

Extra minutes: 24.5p each

Last month, Mirza used 112 minutes.

(d) Work out how much he paid in total last month.

£ .....

(4)

(Total for Question 2 is 7 marks)

3 Lynn lives in Baston.
She is going to go to the cinema in Peterborough.
She will travel by bus between Baston and Peterborough.

Here is part of the bus timetable from Bourne to Peterborough and from Peterborough to Bourne.

Bourne to Peterborough							
Bourne	15 00	15 30	16 00	16 30	17 00	17 30	18 30
Baston	15 12	15 42	16 12	16 42	17 12	17 42	18 42
Market Deeping	15 20	16 00	16 20	17 00	17 20	18 00	18 50
Northborough	15 24	16 04	16 24	17 04	17 24	18 04	18 54
Glinton	15 28	16 08	16 28	17 08	17 28	18 08	18 58
Peterborough	15 40	16 20	16 40	17 20	17 40	18 20	19 10

Peterborough to Bourne							
Peterborough	17 30	17 45	18 00	18 30	19 30	2015	21 45
Glinton	17 42	17 57	18 12	18 42	19 42	20 27	21 57
Northborough	17 46	18 01	18 16	18 46	19 46	20 31	22 01
Market Deeping	17 50	18 05	18 20	18 50	19 50	20 35	22 05
Baston	18 05	18 10	18 35	19 05	19 55	20 50	22 10
Bourne	18 17	18 22	18 47	19 15	20 05	21 00	22 20

It takes Lynn 30 minutes to walk between the bus station in Peterborough and the cinema.
The latest bus she can catch home leaves Peterborough at 21 45

Lynn wants to watch a film called Sherlock Holmes.

Sherlock Holmes

Running time: 2 hours 14 minutes
Starts at: 4:15 pm, 5:15 pm, 7:10 pm

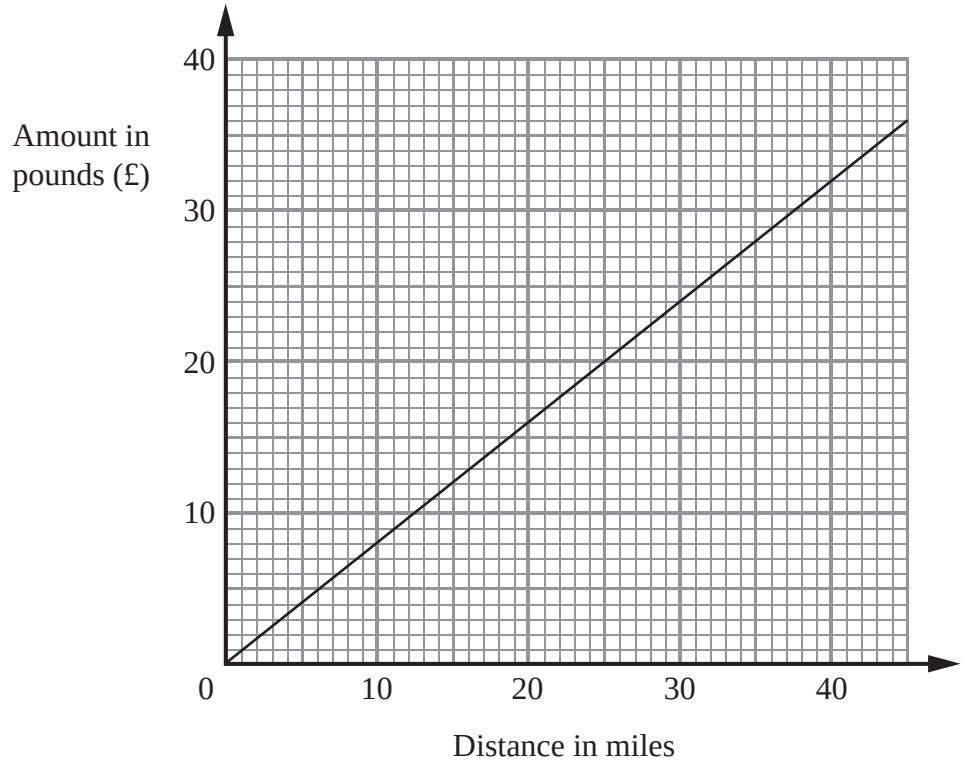
The film lasts for 2 hours 14 minutes.

Plan a schedule for Lynn's visit to the cinema.

Schedule	Time
Bus leaves Baston	
Bus arrives Peterborough	
Film starts	
Bus leaves Peterborough	
Bus arrives Baston	

(Total for Question 3 is 5 marks)

8 Sophie's company pays her 80p for each mile she travels.
The graph can be used to work out how much her company pays her for travel.



Sophie travels 20 miles.

(a) Work out how much her company pays her.

£.....

(1)

Sophie's company paid her £60

(b) Work out the distance Sophie travelled.

..... miles

(2)

(Total for Question 8 is 3 marks)

1 (a) Write the number **three thousand one hundred and nine** in figures.

.....

(1)

(b) Write down the value of the 6 in the number 23.469

.....

(1)

(c) Write the number 4261 correct to the nearest hundred.

.....

(1)

(Total for Question 1 is 3 marks)

2 Mr Morris is going to take his family to the zoo.

Ticket prices (per person)	
Adult	£16.50
Child (3 – 14)	£13.50
Child (under 3)	free

Mr Morris wants to buy tickets for two adults and two children aged 2 and 4

(a) How much in total will the tickets cost?

£ .....

(2)

Mr Morris pays with three £20 notes.

(b) How much change should he get?

£ .....

(2)

(Total for Question 2 is 4 marks)

8 At midnight the temperature was –9°C.
By 10 am, the temperature had risen by 8°C.

(a) Work out the temperature at 10 am.

.....°C
(1)

At midday the temperature was 5°C.

(b) Work out the difference between the temperature at midnight and the temperature at midday.

.....°C
(2)

On another day

the temperature at midnight was –7°C,
the temperature at 10 am was –1°C and
the temperature at midday was 3°C.

Jenny says that, on this day, the temperature at 10 am is halfway between the temperatures at midnight and at midday.

(c) Is Jenny correct?
You must give a reason for your answer.

.....

.....

.....

(2)

(Total for Question 8 is 5 marks)

***9** Jerry is making some shelves.
He needs
5 pieces of wood of length 65 cm
2 pieces of wood of length 110 cm.

The wood is sold in three different lengths.
Information about these lengths is shown in the table.

Length	**Cost**
100 cm	£21
150 cm	£25
180 cm	£28

Jerry wants to pay as little money as possible.
How much will Jerry have to pay?

You must show your working.

(Total for Question 9 is 4 marks)

2 (a) How many minutes are there between 8.50 pm and 10.05 pm?

..... minutes
(1)

(b) (i) Write 15 25 using the 12-hour clock.

.....

(ii) Write 9.15 pm using the 24-hour clock.

.....
(2)

Lucy and Saad went to a cafe on the same day.

Lucy was in the cafe from 10.15 am to 10.45 am.
Saad was in the cafe from 10.25 am to 11.05 am.

(c) Work out the number of minutes that Lucy and Saad were in the cafe at the same time.

..... minutes
(2)

(Total for Question 2 is 5 marks)

2 (a) Work out 90 ÷ 10

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

2.8 4.71 0.6 13.4

.....

(1)

(c) Write $\frac{7}{10}$ as a decimal.

.....

(1)

(Total for Question 2 is 3 marks)

***8** Yusuf is planning a disco party at his Youth Club.
Here are his costs.

Mobile Disco	£230
Hire of room	£150
Other costs	£30
Food	£12 per person

Yusuf charges £16 per ticket.
He sells 100 tickets.

Is there enough money from the ticket sales for Yusuf to pay all his costs?
You must show your working.

(Total for Question 8 is 4 marks)

9 The table shows the highest temperature and the lowest temperature in London and in Oslo on the same day.

	Highest	Lowest
London	8°C	-7°C
Oslo	-4°C	-9°C

(a) Work out the difference between the **lowest** temperature in London and the **lowest** temperature in Oslo.

..... °C
(1)

(b) Work out the difference between the **highest** temperature in London and the **lowest** temperature in London.

..... °C
(1)

(Total for Question 9 is 2 marks)

10 (a) Work out $\frac{1}{2} \times \frac{1}{5}$

.....

(1)

(b) Work out $\frac{1}{2} + \frac{3}{8}$

Give your answer in its simplest form.

.....

(2)

(Total for Question 10 is 3 marks)

***13** Comp Parts and Z Parts both sell memory sticks.

Comp Parts	Z Parts
Memory sticks £4 each  1 free stick for every 10 sticks bought	Memory sticks  £35 for a box of 10 sticks

There are 150 students in Year 10 in a school.
A teacher needs to buy a memory stick for each student.

At which of the shops should he buy the memory sticks?
You must show all your working.

(Total for Question 13 is 5 marks)

15 Work out 342×24

.....

(Total for Question 15 is 3 marks)

18 Veena bought some food for a barbecue.
She is going to make some hot dogs.
She needs a bread roll and a sausage for each hot dog.

There are 40 bread rolls in a pack.
There are 24 sausages in a pack.

Veena bought exactly the same number of bread rolls and sausages.

(i) How many packs of bread rolls and packs of sausages did she buy?

..... packs of bread rolls

..... packs of sausages.

(ii) How many hot dogs can she make?

..... hot dogs

(Total for Question 18 is 5 marks)

5 The table shows the midday temperature on each day for ten days.

Day	1	2	3	4	5	6	7	8	9	10
Temperature (°C)	13	14	12	10	13	16	14	13	18	16

(a) Find the range of temperatures.

..... °C

(2)

(b) Write down the mode.

..... °C

(1)

(c) Work out the mean temperature.

..... °C

(2)

(Total for Question 5 is 5 marks)

7 Here is a list of some TV programmes for one day.

13 30	News
13 45	Doctors
14 10	Escape to the country
15 05	CBeebies
15 15	Gigglebiz
15 35	Jakers
15 55	Shaun the sheep
16 05	Dani's house

Caroline wants to record CBeebies and Jakers onto a DVD.

How many minutes of recording time does she need?

..... minutes

(Total for Question 7 is 2 marks)

10 Stuart is organising a trip to a theme park.

This table shows the age of each person going on the trip.

Name	Age (years)
Stuart	47
Helen	43
Samantha	18
Georgina	15
Melissa	11
Alfie	4
Finlay	1

This table shows the costs of the tickets to the theme park.

Ticket	Cost (£)
Adult (16 to 59 years)	£14
Child (4 to 15 years)	£10
Infant (0 to 3 years)	free
Group of 4 people (2 Adults + 2 children, or 1 Adult + 3 children)	£43
Senior Citizen (60+ years)	£12

Work out the cheapest total cost of the tickets.
You must show all of your working.

£ .....

(Total for Question 10 is 5 marks)

Question 19

1 (a) Write the following numbers in order of size.
Start with the smallest number.

5 17 2 25 8

.....

(1)

(b) Write the following numbers in order of size.
Start with the smallest number.

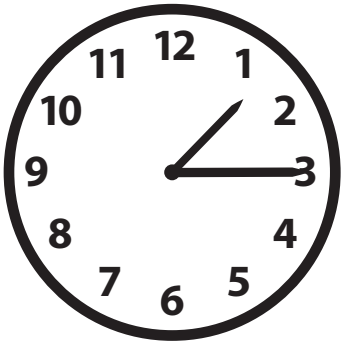
–3 0 6 –10 –7

.....

(1)

(Total for Question 1 is 2 marks)

2

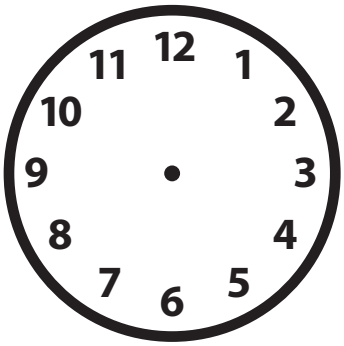


(a) What time does the clock show?

.....

(1)

(b) On the clock below, show the time half past two.



(1)

Claire leaves home at 3.30pm.
She arrives at the station at 4.20pm.

(c) How long did her journey from home to the station take?

..... minutes

(2)

(Total for Question 2 is 4 marks)

3 The table shows some temperatures at midnight in Canada.

Town	Temperature at midnight
Banff	2°C
Norquay	–4°C
Revelstoke	–6°C
Calgary	5°C

(a) What is the difference in temperatures

(i) between Norquay and Revelstoke,

..... °C

(ii) between Calgary and Revelstoke?

..... °C

(2)

In Revelstoke, the temperature drops by 11°C from midnight to 6am.

(b) What is the temperature in Revelstoke at 6am?

..... °C

(1)

(Total for Question 3 is 3 marks)

7 A ticket for a football match costs £38
Ahmed has £120
He buys as many tickets as possible.

(a) How many tickets does he buy?

.....

(2)

(b) How much money has he got left?

£ .....

(1)

(Total for Question 7 is 3 marks)

11 Here is a bill for a dishwasher repair.
Complete the bill.



Dishwasher Repair

Description	Number	Cost of each item	Total
Filter	1	£28.95	£28.95
Basket wheel	8	£1.50	£ .....
Spray arm	2	£	£20.90
Labour charge $1\frac{1}{2}$ hours at £18.00 an hour			£ .....
Total cost			£ .....

(Total for Question 11 is 4 marks)

13 (a) Write down the value of 7^2

.....

(1)

(b) Write down the value of $\sqrt{25}$

.....

(1)

(c) Write down the value of 2^3

.....

(1)

(Total for Question 13 is 3 marks)

16 Buses to Exeter leave a bus station every 20 minutes.
Buses to Plymouth leave the bus station every 16 minutes.
A bus to Exeter and a bus to Plymouth both leave the bus station at 8am.

When will buses to Exeter and Plymouth next leave the bus station at the same time?

.....

(Total for Question 16 is 3 marks)

Question 26

17 Given $x = 4$

Work out the value of $2x^2+7$

.....

(Total for Question 17 is 2 marks)

6 Emma lives in Manchester.
She is planning to travel from Manchester to Blackpool.

The timetable shows information about the times of the trains Emma can catch from Manchester.

Manchester to Blackpool

Manchester	08 00	09 15	10 30
Bolton	08 20	09 30	10 57
Preston	08 45	09 55	11 25
Blackpool	09 30	10 40	11 52

Emma is going to meet her friend in Blackpool at 11 am.

(a) What is the time of the latest train she can catch?

.....

(1)

(b) Work out the least time one of these trains takes from Manchester to Blackpool.

..... minutes

(3)

Emma and her friend spend $\frac{3}{4}$ hour having lunch.

(c) Write $\frac{3}{4}$ hour in minutes.

..... minutes

(1)

(Total for Question 6 is 5 marks)

***10** Joanne and Guy are planning their summer holiday in Sunsville.
They are going to stay in a hotel.

The tables show the costs, in £, for adults and children at each of 3 hotels.

Hotel Bona Vista

	May			June		
Date	**1-10**	**11-20**	**21-31**	**1-10**	**11-20**	**21-30**
Adult	500	525	575	600	625	650
Child 5-15	200	250	300	325	350	375
Child under 5	100	125	150	175	200	225

Hotel Supersol

	May			June		
Date	**1-10**	**11-20**	**21-31**	**1-10**	**11-20**	**21-30**
Adult	620	650	675	700	725	750
Child 5-15	160	200	250	250	275	300
Child under 5	100	100	150	150	150	175

Hotel Sunswift

	May			June		
Date	**1-10**	**11-20**	**21-31**	**1-10**	**11-20**	**21-30**
Adult	620	620	620	630	640	650
Child under 16	150	150	150	160	170	180

Joanne and Guy have two children aged 2 and 6
They want to go on holiday from 11-20 June.

Which is the cheapest hotel for them?
You must show all your working.

(Total for Question 10 is 5 marks)

2 (a) Write the number **ten thousand five hundred and seventy** in figures.

.....

(1)

(b) Work out 56 000 ÷ 100

.....

(1)

(c) Write these numbers in order of size.
Start with the smallest number.

3.95 2.17 5.03 6.84

.....

(1)

(d) Write down the value of

(i) the square of 7

.....

(ii) 2^3

.....

(2)

(Total for Question 2 is 5 marks)

4 Priya and Amit are going on holiday with their 3 children.

The table gives information about the cost of travel and the cost of the hotel.

Travel	Each adult	£60
	Each child	£50
Hotel	Room for 2 adults	£45 per night
	Room for 3 children	£55 per night

Priya and Amit have saved £1500 for their holiday.
They will be away for 7 nights.

Work out how much of the £1500 they will have left to spend on their holiday.

£ .....

(Total for Question 4 is 4 marks)

5

Day	Weather	maximum day temperature (°C)	minimum night temperature (°C)
Sunday	 Sunny	–9°C	–15°C
Monday	 Sunny Intervals	–6°C	1°C
Tuesday	 Grey Cloud	–1°C	–3°C
Wednesday	 Sunny Intervals	0°C	– 2°C
Thursday	 Sunny Intervals	5°C	2°C

The table shows information about the weather forecast for 5 days.

(a) What is the highest minimum **night** temperature?

..... °C

(1)

(b) (i) Which day has the greatest difference between the maximum day temperature and the minimum night temperature?

.....

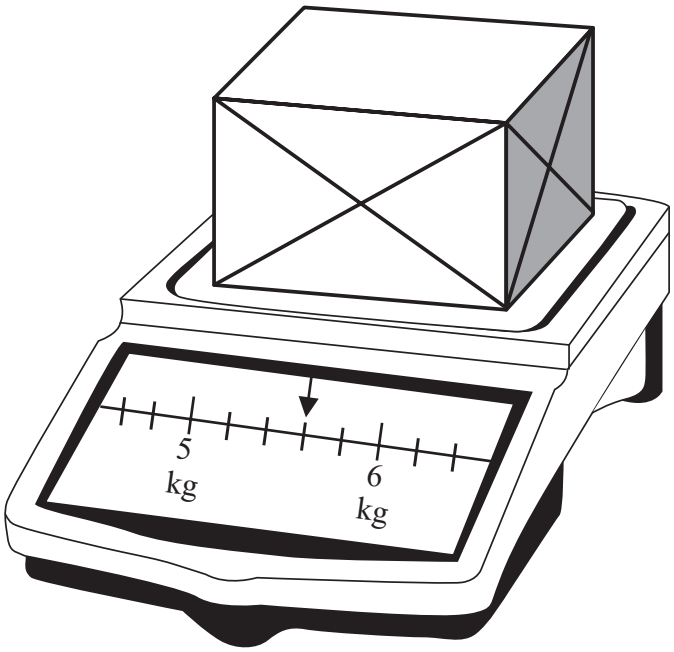
(ii) What is this difference in temperature?

..... °C

(2)

(Total for Question 5 is 3 marks)

6 A parcel is being weighed.



(a) Write down the weight of the parcel.

..... kg

(1)

The table shows information about the cost of posting parcels.

maximum weight	2 kg	4 kg	6 kg	8 kg	10 kg	20 kg
cost	£4.41	£7.06	£9.58	£11.74	£12.61	£14.69

(b) Write down the cost of posting the parcel.

£ .....

(1)

(Total for Question 6 is 2 marks)

***8**

Calculators
£6 each

1 free calculator
with every 4 calculators bought

Jessie needs to buy 28 calculators.
She has £140

Has Jessie enough money to get 28 of these calculators?
You must show all your working.

(Total for Question 8 is 3 marks)

13 (a) Work out $20 - 12 \div 4$

.....

(1)

(b) Put brackets in to make this a true statement.

$$5 + 3 \times 2 - 1 = 15$$

(1)

(c) Work out -8×-3

.....

(1)

(d) Work out $\frac{7}{10} + \frac{1}{5}$

.....

(2)

(Total for Question 13 is 5 marks)

4 The table shows information about 5 Ford cars.

Car	Number of doors	Engine size (litres)	Type of fuel	Cost (£)
Focus	2	2.0	petrol	18 495
Mondeo	5	2.0	diesel	21 495
Ka	3	1.2	petrol	7 995
Fusion	5	1.4	petrol	11 595
Galaxy	5	2.0	diesel	21 995

(a) Which car has the smallest engine size?

.....

(1)

(b) How many of these cars have 5 doors **and** use petrol?

.....

(1)

Three of the cars have 5 doors.

(c) Which of these three cars costs the least?

.....

(1)

(Total for Question 4 is 3 marks)

7 Jenny is decorating her bedroom.



She buys three tins of paint.
One of the tins costs £13.68
The other two tins each cost £8.10
Jenny also buys a pack of paintbrushes.
The pack costs £6.99
Jenny gets $\frac{1}{3}$ off the total cost.

Jenny pays with two £20 notes.

How much change should Jenny get?

£ .....

(Total for Question 7 is 4 marks)

8 Sue lives in Sudbury.
She has a meeting in Chelmsford.
She is going to travel on the train that travels from Sudbury to London.

Here is part of the train timetable from Sudbury to London.

Sudbury to London							
Sudbury	05 30	06 30	07 17	08 00	09 00	10 00	11 00
Bures	05 37	06 37	07 24	08 07	09 07	10 07	11 07
Chappel & Wakes Colne	05 43	06 43	07 30	08 13	09 13	10 13	11 13
Marks Tey	05 49	06 49	07 36	08 19	09 19	10 19	11 19
Chelmsford	06 14	07 14	08 09	08 44	09 42	10 39	11 39
London	06 49	07 51	08 48	09 22	10 17	11 18	12 16

It takes Sue 10 minutes to walk from her home to the train station in Sudbury.
It takes Sue 20 minutes to get from the station in Chelmsford to her meeting.

Her meeting starts at 9 30 am.

Plan a schedule for Sue's journey to her meeting in Chelmsford.
You must show the times of all stages of her journey.

(Total for Question 8 is 3 marks)

1 (a) Write the number 8 million in figures.

.....

(1)

(b) Write the number 7102 in words.

.....

(1)

(c) Write the number 15.46 correct to one decimal place.

.....

(1)

(d) Write the number 421 correct to two significant figures.

.....

(1)

(Total for Question 1 is 4 marks)

Question 39

2 $a = 3$
$b = 5$

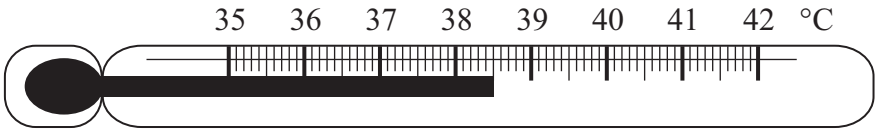
Work out the value of $4a + 2b$

.....

(Total for Question 2 is 2 marks)

9 Mason is ill.

The diagram shows Mason's body temperature, in °C, on a thermometer.



Normal body temperature is 36.8 °C.

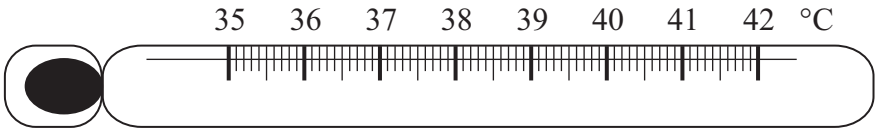
(a) Work out the difference between Mason's body temperature and normal body temperature.

..... °C

(2)

Mason's body temperature drops by 1.2 °C.

(b) Show Mason's new body temperature on the thermometer below.



(1)

(Total for Question 9 is 3 marks)

*12 Daniel wants to buy a laptop.
Two shops sell the same make of laptop.

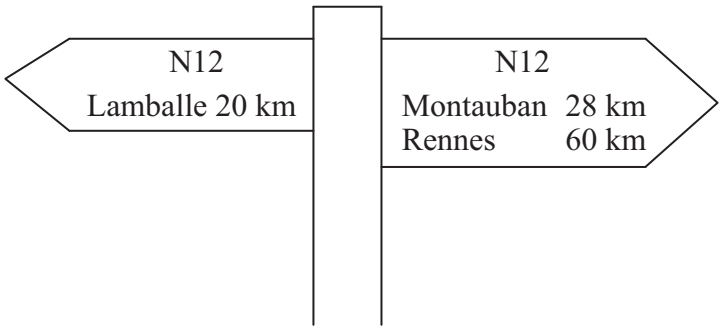
Arnold's Computers	Laptop World
£630	
	
Special offer: 1/3 off all prices	Pay £100 plus 12 monthly payments of £30

Daniel wants to pay the least amount of money for his laptop.

Which of the two shops should Daniel buy the laptop from?
You must show all of your working.

(Total for Question 12 is 4 marks)

13 Caroline is driving her car in France.
She sees this road sign.



(a) Work out the distance between Lamballe and Montauban on the N12

..... km
(1)

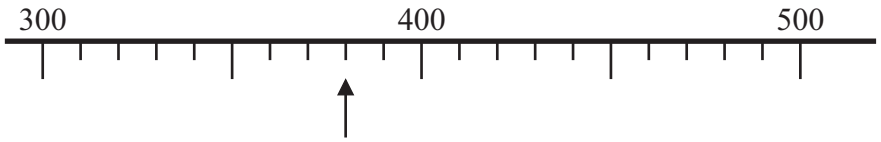
Caroline is going to Rennes on the N12
She stops driving 10 miles from the road sign.

(b) Work out how much further Caroline has to drive to get to Rennes.

.....
(3)

(Total for Question 13 is 4 marks)

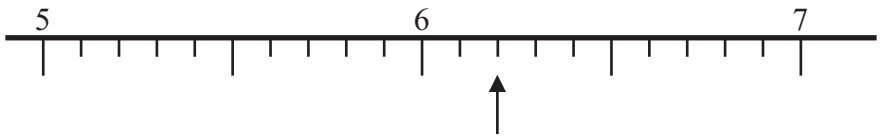
1



(a) Write down the number marked by the arrow.

.....

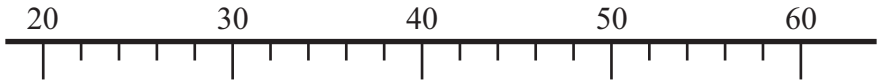
(1)



(b) Write down the number marked by the arrow.

.....

(1)



(c) Find the number 34 on the number line.
Mark it with an arrow (↑).

(1)

(Total for Question 1 is 3 marks)

4 Daniel buys

one loaf of bread costing £1.18
one tub of spread costing 94p
two jars of strawberry jam.

Daniel pays with a £5 note.
He gets 30p change.

Work out the cost of **one** jar of strawberry jam.

£ .....

(Total for Question 4 is 3 marks)

6 Samina recorded the maximum temperature and the minimum temperature on each of six days in January.

The table shows her results.

	Mon	Tues	Wed	Thurs	Fri	Sat
Maximum temperature	1 °C	3 °C	2 °C	0 °C	3 °C	4 °C
Minimum temperature	– 4 °C	–2 °C	– 4 °C	–5 °C	–3 °C	–2 °C

(a) Write down the lowest temperature.

..... °C

(1)

(b) Work out the difference between the maximum temperature on Wednesday and the minimum temperature on Wednesday.

..... °C

(1)

The minimum temperature on Sunday was 5 °C higher than the minimum temperature on Saturday.

(c) Work out the minimum temperature on Sunday.

..... °C

(1)

(Total for Question 6 is 3 marks)

Question 46

11 (a) Write down the value of $\sqrt{81}$

.....

(1)

(b) Work out the value of $5^2 + 2^3$

.....

(2)

(Total for Question 11 is 3 marks)

13 Here is part of a train timetable from Birmingham to Leicester.

Birmingham	06 23	06 53	07 23	07 53
Coleshill	06 35	07 05	07 35	08 05
Nuneaton	07 00	07 22	07 51	08 22
Hinckley	–	07 29	07 58	08 29
Leicester	07 17	07 48	08 17	08 48

A train leaves Birmingham at 06 53

(a) (i) What time should this train get to Hinckley?

.....

(ii) How many minutes should this train take to get to Hinckley?

..... minutes

(2)

Silvia wants to catch a train in Nuneaton.
She needs to get to Leicester **before** 08 30

(b) Write down the time of the latest train Silvia can catch from Nuneaton.

.....

(1)

A train will leave Leicester at 07 27 for Stansted Airport.
The train should take 2 hours 28 minutes to go from Leicester to Stansted Airport.

(c) What time should the train get to Stansted Airport?

.....

(1)

(Total for Question 13 is 4 marks)

22 The diagram shows a patio in the shape of a rectangle.

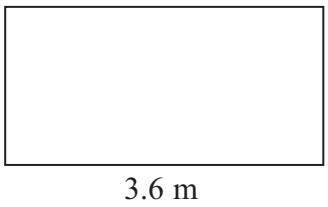


Diagram **NOT** accurately drawn

The patio is 3.6 m long and 3 m wide.

Matthew is going to cover the patio with paving slabs.
Each paving slab is a square of side 60 cm.

Matthew buys 32 of the paving slabs.

(a) Does Matthew buy enough paving slabs to cover the patio?
You must show all your working.

.....

(3)

The paving slabs cost £8.63 each.

(b) Work out the total cost of the 32 paving slabs.

£ .....

(3)

(Total for Question 22 is 6 marks)

24 Buses to Acton leave a bus station every 24 minutes.
Buses to Barton leave the same bus station every 20 minutes.

A bus to Acton and a bus to Barton both leave the bus station at 9 00 am.

When will a bus to Acton and a bus to Barton next leave the bus station at the same time?

.....

(Total for Question 24 is 3 marks)

Question 50

1 (a) Write the number **four thousand, two hundred and sixteen** in figures.

.....

(1)

(b) Write down the value of the 8 in the number 78 561

.....

(1)

(c) Write the number 3568 to the nearest ten.

.....

(1)

(Total for Question 1 is 3 marks)

4 Jalin has a £10 note to spend on stickers.
A packet of stickers costs 79p.

He buys as many packets of stickers as possible.

Work out how much change Jalin should get.

.....

(Total for Question 4 is 3 marks)

9 The table gives information about five printers.

Printer	Cost	Wi-fi	Print from a camera	Printing cost per page
Smart	£260	✓	✓	4p
Office	£138		✓	2p
Kanon	£285	✓	✓	5p
Elton	£160	✓		4p
Quikprint	£115		✓	3p

(a) Which printer costs the most?

.....

(1)

(b) Which printers do **not** have wi-fi?

.....

(1)

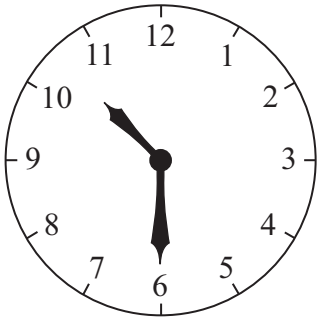
(c) Which printer has a printing cost per page of 4p **and** can print from a camera?

.....

(1)

(Total for Question 9 is 3 marks)

11 (a) Write down the time shown on this clock.



.....

(1)

(b) Write 4 10 pm using the 24-hour clock.

.....

(1)

Ed goes to the gym on his way to work.

He takes 15 minutes to walk from his home to the gym.
He will be at the gym for 1 hour.
Ed takes 10 minutes to walk from the gym to work.

Ed needs to be at work at 8 15 am.

(c) What is the latest time he can leave home?

.....

(2)

(Total for Question 11 is 4 marks)

4 Amanda lives in Hanford.
She wants to go on a shopping trip to Middleton.
She is going to go by train.

Here is part of the train timetable from Hanford to Middleton and from Middleton to Hanford.

Hanford to Middleton						
Hanford	08 05	09 05	09 35	10 05	10 35	11 05
Market Down	08 17	09 17	09 47	10 17	10 47	11 17
Kimble	08 30	09 30	10 00	10 30	11 00	11 30
Treach	08 39	09 39	10 09	10 39	11 09	11 39
Middleton	08 48	09 48	10 18	10 48	11 18	11 48

Middleton to Hanford						
Middleton	13 11	13 42	14 11	14 42	15 11	15 42
Treach	13 20	13 51	14 20	14 51	15 20	15 51
Kimble		14 01		15 01		16 01
Market Down	13 43	14 16	14 42	15 16	15 42	16 16
Hanford	13 53	14 26	14 53	15 26	15 53	16 26

It takes Amanda 5 minutes to walk between her home and Hanford station.
She wants to have at least 4 hours in Middleton.
She wants to get back home by 4 pm that day.

Plan a schedule for Amanda's shopping trip.

	Start time	Finish time
Home to Hanford station		
Hanford station to Middleton station		
Time in Middleton		
Middleton station to Hanford station		
Hanford station to home		

(Total for Question 4 is 5 marks)

7



Single calculator

£3.75



Pack of three calculators

£9

A shop sells calculators.

In the shop,
a single calculator costs £3.75
a pack of three calculators costs £9

Sarah buys 8 of these calculators.
She buys the calculators at the least possible cost.

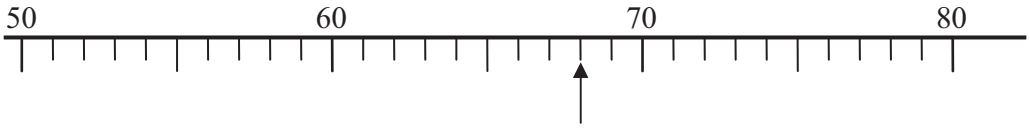
Sarah pays with two £20 notes.

How much change should she get?

£ .....

(Total for Question 7 is 3 marks)

1



(a) Write down the number marked with an arrow.

.....

(1)

(b) Write the number **four million** in figures.

.....

(1)

(c) Write down the value of the 7 in 43.765

.....

(1)

(Total for Question 1 is 3 marks)

Question 57

4 Sophie goes to the market.

She buys 3 lettuces at 45p each,
2 kg of potatoes at 75p per kg,
500 g of cheese at £1.50 per 100 g.

Sophie pays with a £20 note.

How much change should she get?

£ .....

(Total for Question 4 is 4 marks)

Question 58

9 Jeff lives in Bath.
He works in an office in London.

Jeff leaves his home in Bath at 07 10
He catches a train in Bath at 07 35

The train takes 1 hour 35 minutes to get to London.
It then takes Jeff 40 minutes to get to his office.

At what time does Jeff get to his office?

.....

(Total for Question 9 is 3 marks)

13 (a) Work out $\frac{2}{5} \times \frac{3}{8}$

Give your answer in its simplest form.

.....

(2)

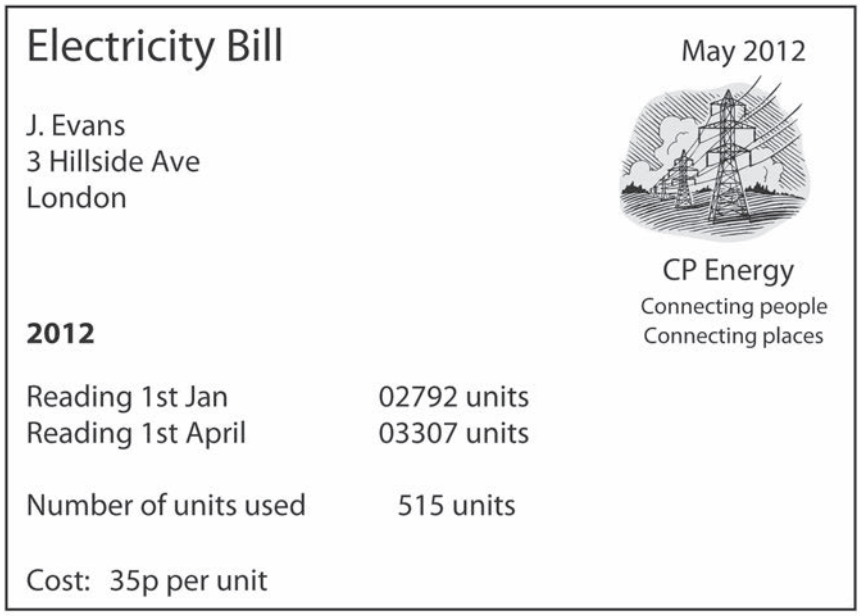
(b) Work out $\frac{3}{8} + \frac{1}{4}$

.....

(2)

(Total for Question 13 is 4 marks)

15 Here is part of Jo's electricity bill.



Electricity Bill

May 2012

J. Evans
3 Hillside Ave
London

CP Energy
Connecting people
Connecting places

2012

Reading 1st Jan	02792 units
Reading 1st April	03307 units
Number of units used	515 units

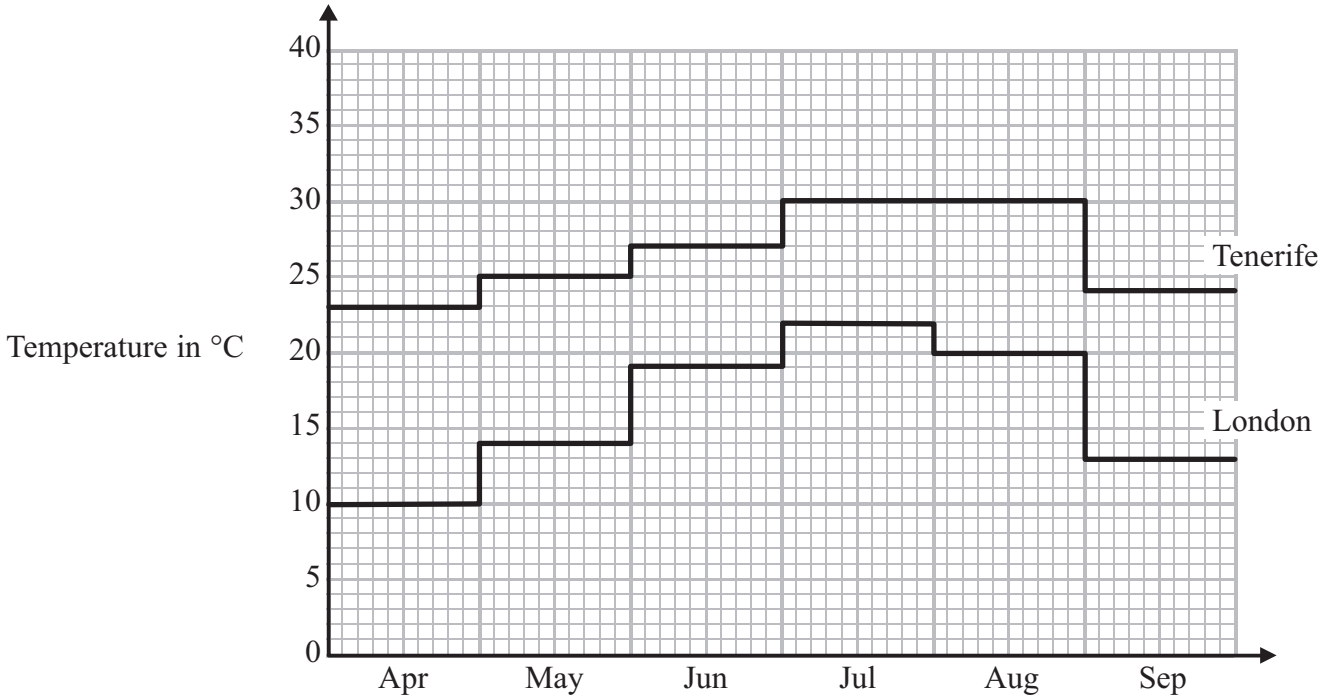
Cost: 35p per unit

Work out how much Jo has to pay for the units she has used.

£ .....

(Total for Question 15 is 4 marks)

2 The diagram shows the average midday temperature in Tenerife and in London during 6 months.



(a) During which two months is the average midday temperature in Tenerife the same?

.....

(1)

(b) During which month is there the greatest difference between the average midday temperatures in London and in Tenerife?

.....

(1)

(c) Write down the average midday temperature in May for London.

..... °C

(1)

(d) In September, what is the difference between the average midday temperatures in London and in Tenerife?

..... °C

(2)

(Total for Question 2 is 5 marks)

4 (a) Work out $+3 - 5$

.....

(1)

(b) Work out $-12 - 6$

.....

(1)

(Total for Question 4 is 2 marks)

***8** Mark works in a Maths equipment shop in a school.
He sells calculators, rulers and protractors.

Item	Price
Calculator	£2.50
Ruler	15p
Protractor	20p

The table below shows the number of calculators, rulers and protractors Mark sold this week.

	Calculators	Rulers	Protractors
Monday	1	3	2
Tuesday	0	4	0
Wednesday	2	2	0
Thursday	4	0	3
Friday	3	2	2

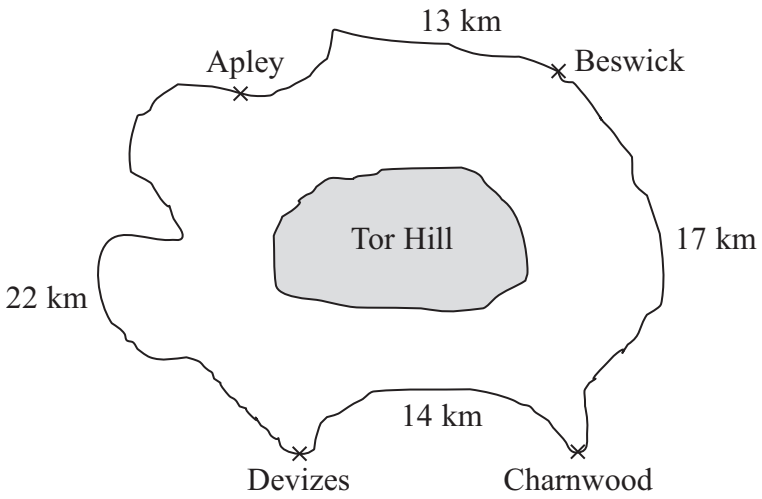
Mark has a sales target of £28 per week.

Has Mark sold at least £28 of equipment this week?
You must show all your working.

(Total for Question 8 is 5 marks)

9 The diagram shows the distance between four towns.

Diagram **NOT** accurately drawn



Sanjay drives from Apley to Beswick then to Charnwood then to Devizes.
He then drives back to Apley.

(a) Work out the total distance Sanjay drives.

..... km
(2)

It is further from Apley to Charnwood through Devizes, than from Apley to Charnwood through Beswick.

(b) How much further?

..... km
(3)

Sanjay runs in a race from Beswick to Charnwood.
There is a water point every kilometre.
The first water point is at Beswick.
The last water point is at Charnwood.

(c) Work out the number of water points.

.....
(2)

(Total for Question 9 is 7 marks)

13 A shop sells a CD for £14

The record company gets $\frac{2}{5}$ of the £14

The shopkeeper gets $\frac{7}{20}$ of the £14

The singer gets the rest of the £14

Work out how much money the singer gets.

£ .....

(Total for Question 13 is 4 marks)

Question 66

15 John makes clay cups.
He makes 18 cups each hour.

He makes cups for $6\frac{1}{2}$ hours each day, on 5 days of the week.

The cups are packed in boxes.
4 cups are packed into each box.

How many boxes are needed for all the cups John makes in a week?

.....

(Total for Question 15 is 4 marks)

18 Ali has x cards.
Belinda has twice as many cards as Ali.
Charlie has 5 more cards than Ali.

They have a total of 33 cards.

(a) Show that $4x + 5 = 33$

(3)

(b) Work out the number of cards Ali has.

.....

(2)

(Total for Question 18 is 5 marks)

Question 68

19 Work out $3\frac{1}{3} \div 4\frac{3}{4}$

.....

(Total for Question 19 is 2 marks)

2 (a) Write down the number **five hundred and seven** in figures.

.....

(1)

(b) Write down the value of the **4** in the number 9346

.....

(1)

(c) Write 6431 to the nearest thousand.

.....

(1)

(Total for Question 2 is 3 marks)

6 The table gives information about the temperatures in Reykjavik for 5 days one week.

Day	Maximum temperature	Minimum temperature
Monday	5 °C	4 °C
Tuesday	8 °C	6 °C
Wednesday	6 °C	−2 °C
Thursday	−1 °C	−4 °C
Friday	−3 °C	−6 °C

(a) Which day had the highest maximum temperature?

.....

(1)

(b) What is the lowest minimum temperature?

..... °C

(1)

(c) Which day had the greatest difference between the maximum temperature and the minimum temperature?

.....

(2)

(Total for Question 6 is 4 marks)

10 Here are the ticket prices for entry to a museum.

Ticket prices
Adult ticket £12 Child ticket £7 Senior ticket £8
Family ticket (2 adult tickets and 2 child tickets) £30

Shamus takes his family to the museum.

He gets tickets for

2 adults,
3 children,
1 senior.

Shamus pays the least possible amount of money for the tickets.
He pays with three £20 notes.

How much change should he get?

£.....

(Total for Question 10 is 4 marks)

14 Here is part of a bus timetable from Harrow Lane to Cartbridge Street.

Harrow Lane to Cartbridge Street

Harrow Lane	08 02	09 04	10 12	11 02	12 04	12 12
Elm Drive	08 19	09 21	10 29	11 19	12 21	12 29
Hamden Road	08 32	09 34	10 42	11 32	12 34	12 42
Swipe Crescent	08 41	09 43	10 51	11 41	12 43	12 51
Cartbridge Street	08 50	09 52	11 01	11 50	12 52	13 01

A bus goes from Harrow Lane to Cartbridge Street.
The bus leaves Harrow Lane at 08 02

(a) At what time should the bus get to Cartbridge Street?

.....

(1)

Here is part of a bus timetable from Cartbridge Street to Harrow Lane.

Cartbridge Street to Harrow Lane

Cartbridge Street	13 11	14 14	15 07	16 11	17 14	18 07
Swipe Crescent	13 20	14 24	15 16	16 20	17 24	18 16
Hamden Road	13 29	14 33	15 25	16 29	17 33	18 25
Elm Drive	13 43	14 47	15 39	16 43	17 47	18 39
Harrow Lane	13 53	14 57	15 49	16 53	17 57	18 49

A bus goes from Cartbridge Street to Harrow Lane.
This bus leaves Hamden Road at 13 29

(b) Work out how many minutes this bus should take to go from Hamden Road to Elm Drive.

.....

(1)

Peter lives in Harrow Lane.
His grandmother lives in Swipe Crescent.

Peter visits his grandmother.
He goes by bus from Harrow Lane to Swipe Crescent.

Peter wants to have at least 3 hours with his grandmother.
He needs to be back at Harrow Lane by 16 00

*(c) Plan Peter's journey to visit his grandmother and get back to Harrow Lane.
You must include the times of the buses.

(4)

(Total for Question 14 is 6 marks)

Question 73

20 Sapir buys 60 bags.
She pays £3 for each bag.

Sapir sells $\frac{1}{2}$ of the bags for £5 each.

She sells $\frac{1}{3}$ of the bags for £4 each.

Sapir wants to make a total profit of £75

How much should she sell each of the remaining bags for?

£.....

(Total for Question 20 is 4 marks)

25 Here is a diagram of Jim's garden.

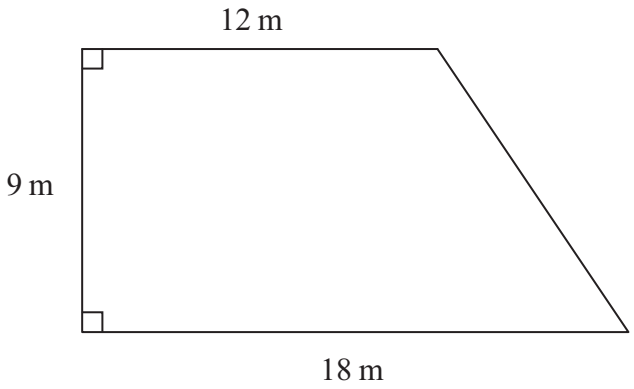


Diagram **NOT** accurately drawn

Jim wants to cover his garden with grass seed to make a lawn.

Grass seed is sold in bags.
There is enough grass seed in each bag to cover 20 m^2 of garden.

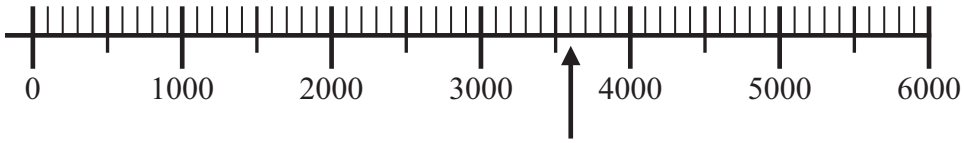
Each bag of grass seed costs £4.99

Work out the least cost of putting grass seed on Jim's garden.

£ .....

(Total for Question 25 is 4 marks)

1 (a)

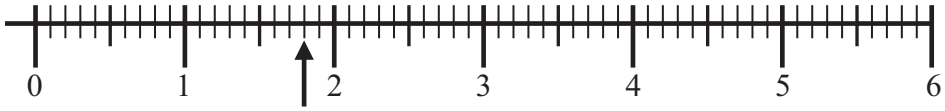


Write down the number marked by the arrow.

.....

(1)

(b)

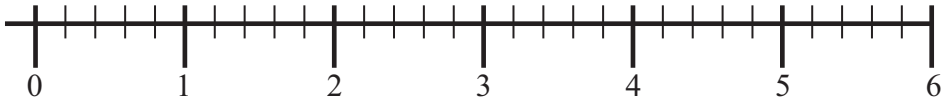


Write down the number marked by the arrow.

.....

(1)

(c)



Find the number 3.6 on the number line above.

Mark the number with an arrow (↑).

(1)

(Total for Question 1 is 3 marks)

*12 The table gives information about the costs of posting parcels.

Maximum weight of a parcel	Cost
2 kg	£4.41
4 kg	£7.06
6 kg	£9.58
8 kg	£11.74
10 kg	£12.61
20 kg	£14.69

Umar has to post some parcels.

He has to post

3 parcels with a weight of 6 kg each
1 parcel with a weight of 10 kg
1 parcel with a weight of 3 kg
1 parcel with a weight of 1.2 kg

Umar has £55 to spend on posting the parcels.

Can he post all the parcels?

(Total for Question 12 is 4 marks)

*14 Here is a diagram of a wall.

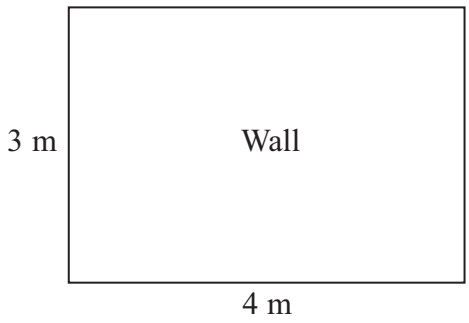
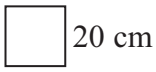


Diagram **NOT** accurately drawn



Tile

Halima wants to cover all of the wall with tiles.

The tiles are squares with sides of length 20 cm.

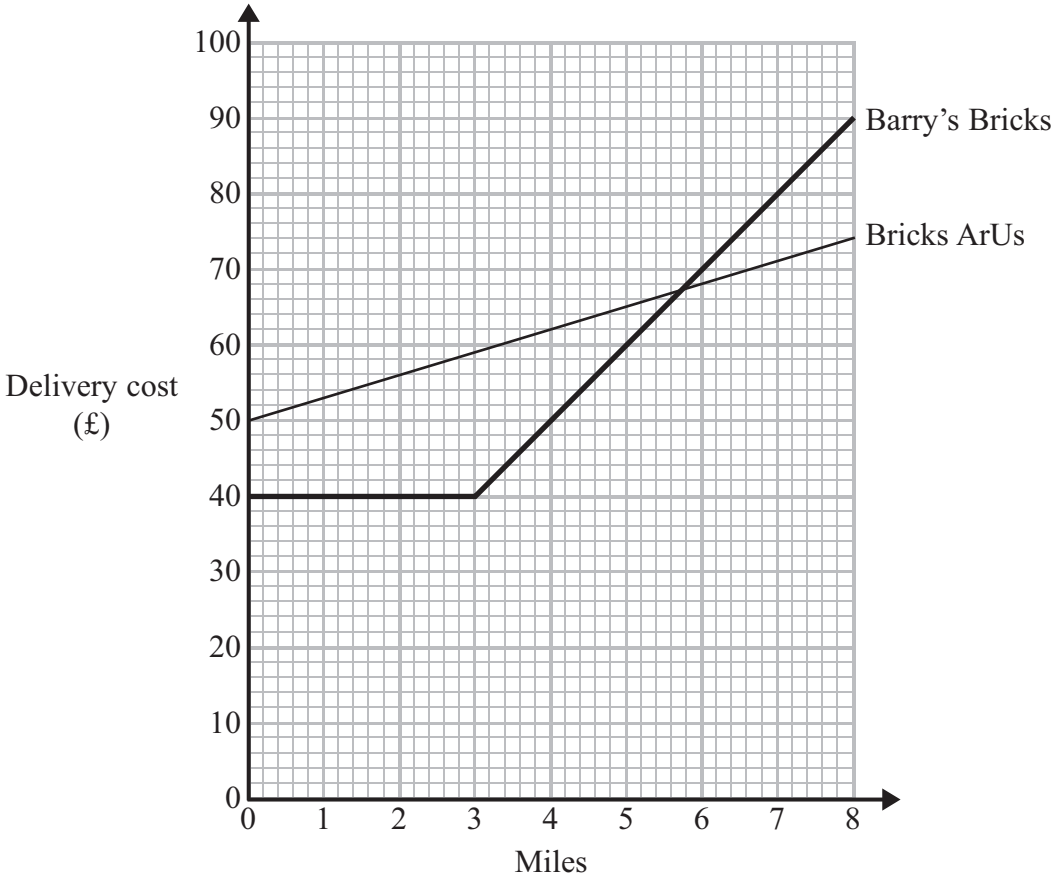
The tiles are sold in packs.
There are 10 tiles in each pack.
Each pack of tiles costs £34.99

Halima only has £1000

Can she buy enough packs of tiles to cover the wall?

(Total for Question 14 is 6 marks)

21 Two companies, Barry's Bricks and Bricks ArUs, deliver bricks.
The graph shows the delivery costs of bricks from both companies.



Prakash wants Bricks ArUs to deliver some bricks.
He lives 2 miles away from Bricks ArUs.

(a) Write down the delivery cost.

£ .....

(1)

John needs to have some bricks delivered.
He lives 4 miles from Barry's Bricks.
He lives 5 miles from Bricks ArUs.

(b) Work out the difference between the two delivery costs.

£ .....

(3)

(Total for Question 21 is 4 marks)

1 The table shows information about some items for sale in a clothes shop.

Item	Size	Colour	Price
Dress	large	red	£28
Trousers	medium	black	£19
Shirt	medium	red	£15
Blouse	large	white	£12
Shorts	small	blue	£16
Fleece	extra large	red	£23

(a) Write down the colour of the blouse.

.....

(1)

(b) Write down the size of the cheapest item that is red.

.....

(1)

Kate bought the dress and the shirt.

(c) Work out the total cost.

£ .....

(1)

(Total for Question 1 is 3 marks)

3 Erin is going on holiday.

When she gets to the airport she looks at the clock.



(a) (i) Write down the time shown on the clock.

.....

Erin's plane will leave at 9.26 am.

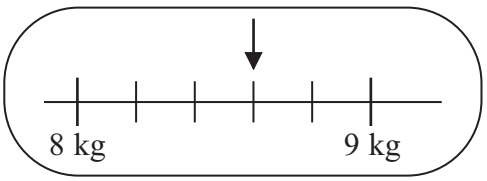
(ii) How long will Erin have to wait until her plane leaves?

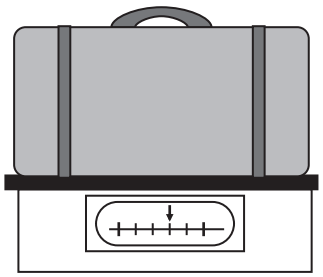
.....

(3)

Erin's suitcase is weighed at the check-in desk.

The scales show the weight of her suitcase.





(b) Write down this weight.

..... kg

(1)

(Total for Question 3 is 4 marks)

5 Calculators cost £3.85 each.

Charlie has £30
She wants to buy as many of these calculators as possible.

Work out how many calculators Charlie can buy.

.....

(Total for Question 5 is 2 marks)

1 The list shows the times trains go from Swindon to London.

Times of trains from Swindon to London
20 11
20 29
21 11
21 29
22 28

Andy is going from Swindon to London by train.
He gets to Swindon at 20 15

(a) How many minutes should Andy have to wait for a train?

..... minutes
(1)

A train leaves Swindon at 22 28
This train takes 72 minutes to get to London.

(b) What time does this train get to London?

.....
(2)

(Total for Question 1 is 3 marks)

2 (a) Write these numbers in order of size.
Start with the smallest number.

3517 7135 5713 1357

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

0.354 0.4 0.35 0.345

.....

(1)

(Total for Question 2 is 2 marks)

5 Eric buys some bottles of water.
Each bottle of water costs £1.95

Eric has £10 to spend.
He buys as many bottles of water as possible.

(i) Work out how many bottles of water Eric buys.

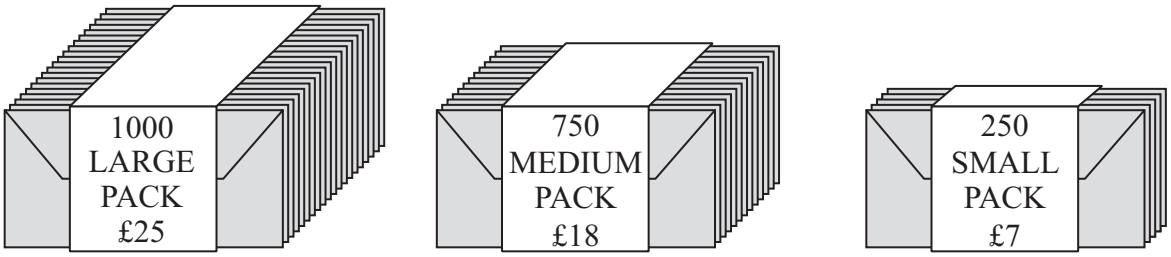
.....

(ii) Work out how much change Eric should get.

.....

(Total for Question 5 is 4 marks)

*10 '*Offices R Us*' sells envelopes in packs.



A large pack costs £25
There are 1000 envelopes in each large pack.

A medium pack costs £18
There are 750 envelopes in each medium pack.

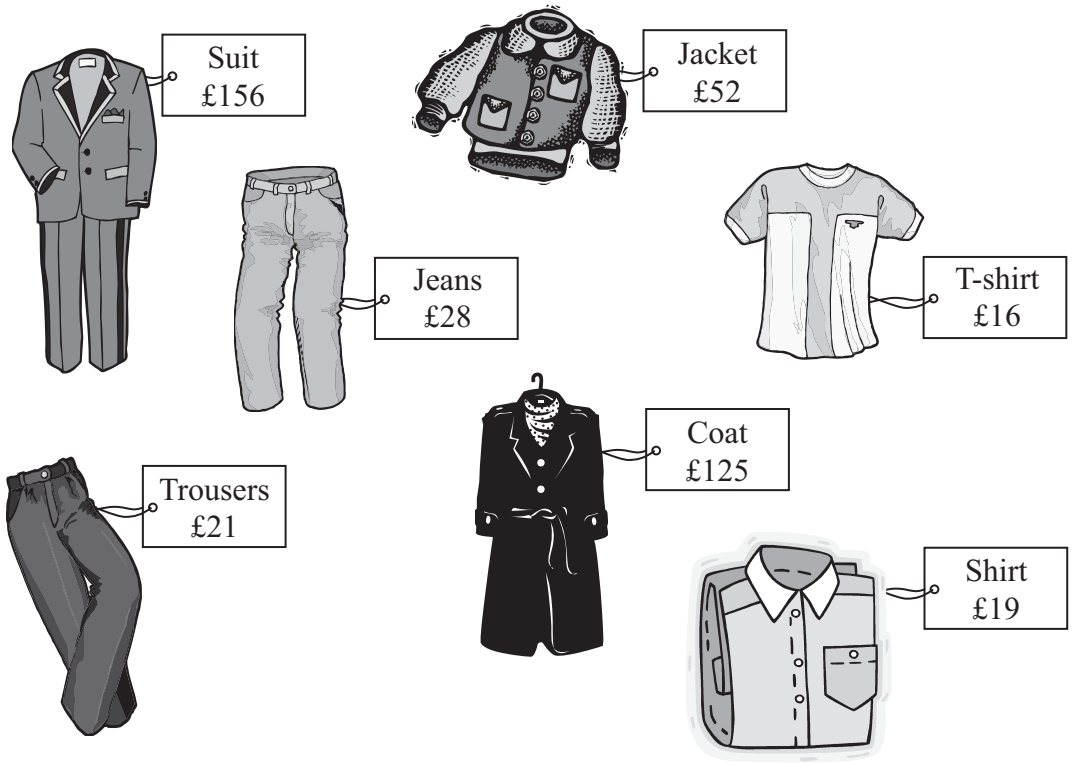
A small pack costs £7
There are 250 envelopes in each small pack.

Astrid needs to buy exactly 1500 envelopes.
She wants to buy the envelopes as cheaply as possible.

Which packs should Astrid buy?
You must show your working.

(Total for Question 10 is 5 marks)

3 Kylie and Roxy go shopping.



Kylie buys the coat and the T-shirt.

(a) Work out the total cost.

£ .....

(2)

Roxy buys two items of clothing.

She pays with £50
She gets £3 change.

(b) Which two items did Roxy buy?

..... and .....

(3)

(Total for Question 3 is 5 marks)

7 Wendy is putting sweets into packets.

She has 9000 sweets.
She puts 45 sweets in each packet.

Wendy puts the packets of sweets into boxes.
She puts 25 packets of sweets into each box.

(a) Work out the total number of boxes Wendy needs.

..... boxes
(3)

Each packet of sweets weighs 690 g.
Each box weighs 260 g.

There are 25 packets of sweets in each box.

(b) Work out the total weight of a full box of sweets.
Give your answer in kilograms.

..... kg
(4)

(Total for Question 7 is 7 marks)

20 $-2 < n \leqslant 3$

n is an integer.

(a) Write down all the possible values of n.

.....

(2)

$3x + 5 > 16$

x is an integer.

(b) Find the smallest value of x.

.....

(3)

(Total for Question 20 is 5 marks)

3 (a) Write these numbers in order of size.
Start with the smallest number.

358 835 709 98 145

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

4 –5 7 –1 –8

.....

(1)

(c) Write these numbers in order of size.
Start with the smallest number.

$\frac{1}{4}$ 0.2 40% $\frac{3}{4}$ 0.5

.....

(2)

(Total for Question 3 is 4 marks)

***5** Sarah wants to buy some fruit.

She wants to buy

3 oranges at 30p each

and $\frac{1}{2}$ kg apples at £1.20 per kg.

The only money Sarah has is one 50p coin and six 20p coins.

She pays for the fruit.

Work out how much money Sarah has left.
You must show all your working.

(Total for Question 5 is 5 marks)

8 (a) Write 8 45 pm as a 24-hour clock time.

.....

(1)

Seeta did a puzzle in 3 minutes 45 seconds.
Ninal did the same puzzle in 7 minutes 28 seconds.

Seeta says,

'I did the puzzle in less than half the time Ninal did the puzzle.'

*(b) Is Seeta right?
You must show all your working.

(3)

(Total for Question 8 is 4 marks)

16 Trams leave Piccadilly

to Eccles every 9 minutes

to Didsbury every 12 minutes

A tram to Eccles and a tram to Didsbury both leave Piccadilly at 9 am.

At what time will a tram to Eccles and a tram to Didsbury next leave Piccadilly at the same time?

.....

(Total for Question 16 is 3 marks)

Question 93

19 Work out 1.83×47

.....

(Total for Question 19 is 3 marks)

***8** A shop sells pencils at

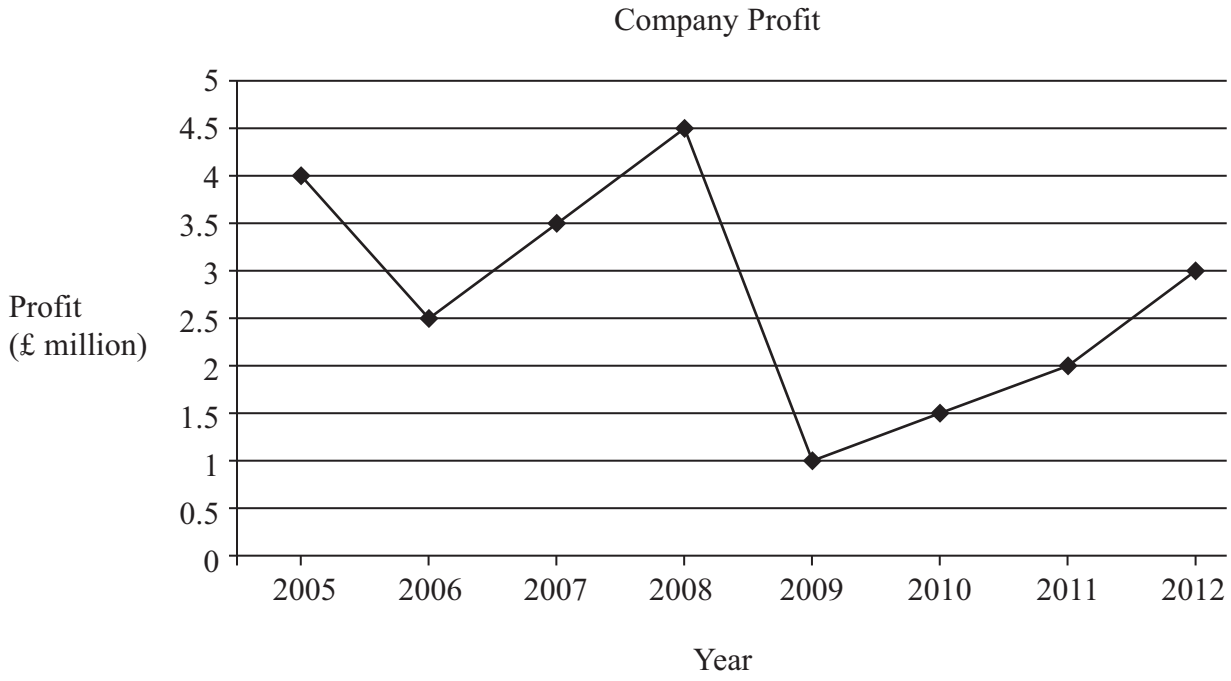
12p each
or 12 pencils in a box at £1.65 per box.

Oliver buys 36 pencils.
He spends the least amount of money.

How much does he spend?
You must show your working.

(Total for Question 8 is 3 marks)

9 The graph shows information about the profit a company made each year from 2005 to 2012



(a) What was the profit in 2006?

£ ..... million

(1)

(b) In which year did the company make the most profit?

.....

(1)

(c) Describe the change in profit from 2009 to 2012

.....

.....

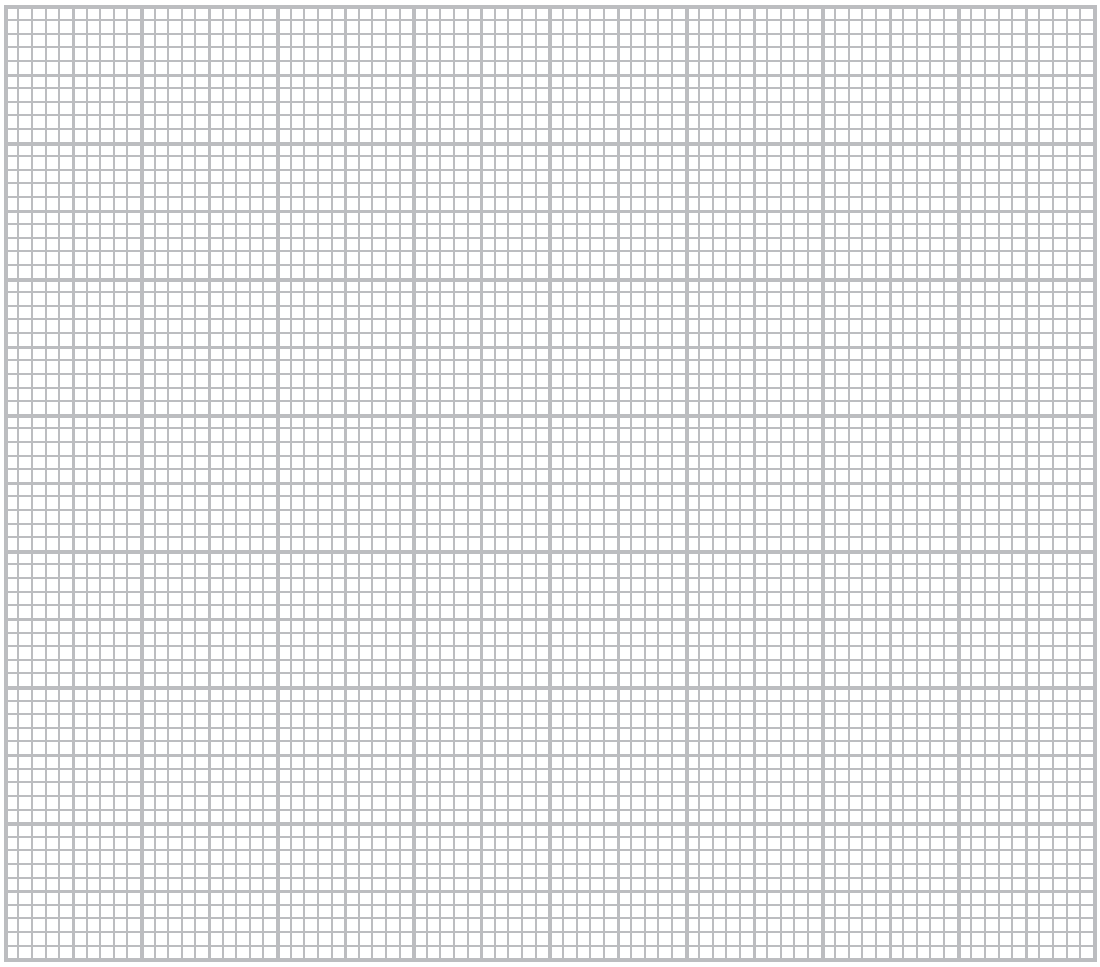
(1)

(Total for Question 9 is 3 marks)

***12** The table shows some information about the minimum and maximum temperatures in Paris each month from January to May.
The temperatures are in °C.

	Jan	Feb	Mar	Apr	May
Minimum temperature	2	3	5	7	10
Maximum temperature	7	8	12	15	19

Show this information in a suitable diagram.



(Total for Question 12 is 4 marks)

Question 97

1 (a) Work out $27 + 38$

.....

(1)

(b) Work out $202 - 75$

.....

(1)

(c) Work out $2 \times 3 \times 5$

.....

(1)

(Total for Question 1 is 3 marks)

Question 98

2 Sam has £480

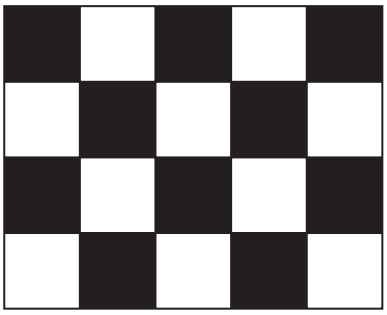
He spends $\frac{1}{4}$ of the £480

Work out how much money Sam has left.

£ .....

(Total for Question 2 is 3 marks)

4 Jim has a board made of squares.



Jim puts 50p on every black square.

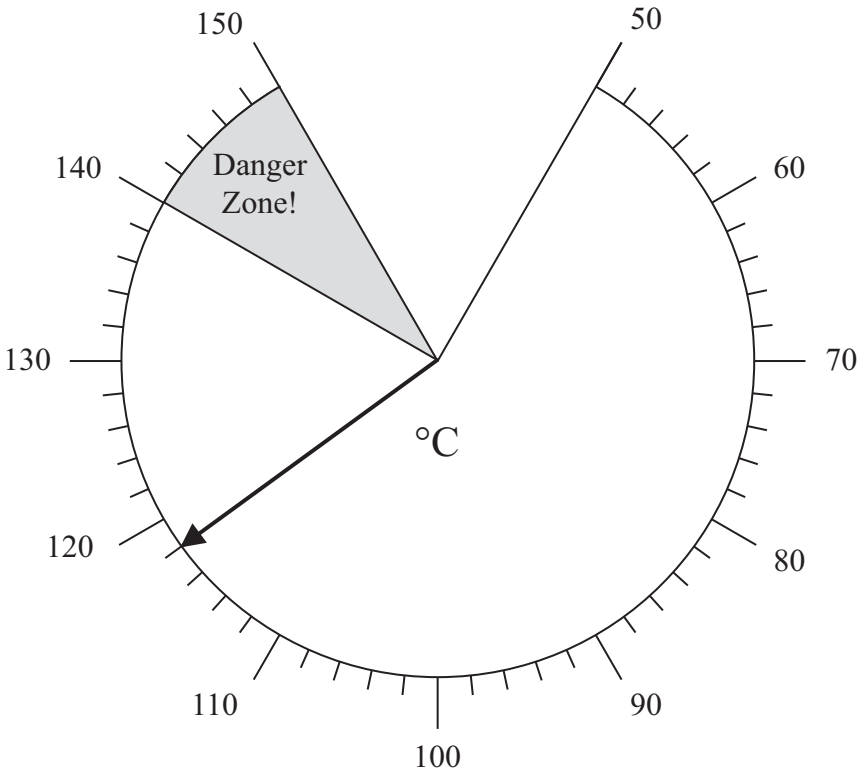
Sophie puts 20p on every white square.

Work out the total amount of money on the board.

.....

(Total for Question 4 is 3 marks)

5



The diagram shows a temperature gauge.

How many degrees does the temperature have to rise to get to the danger zone?

..... °C

(Total for Question 5 is 2 marks)

9 (a) Work out the value of $5 \times 2 + 8$

.....

(1)

(b) Work out the value of $(13 - 6) \times 2$

.....

(1)

(Total for Question 9 is 2 marks)

13 Mr Pole is organising a school trip to London.

The table shows the number of students going on the trip.

Year	Number of Students
7	112
8	65
9	38
10	0
11	0

Mr Pole needs to book coaches for the trip.

Each coach has seats for 50 passengers.

There are going to be 3 adult helpers on each coach.

Work out the least number of coaches needed.

.....

(Total for Question 13 is 3 marks)

***15** Orange squash is used to make orange drink.
Jill is going to make orange drink for 50 people.

She is going to make 2 full glasses of orange drink for each person.
She needs 250 millilitres of orange drink for each glass.

Here are the instructions for making orange drink.

Mix 1 part of orange squash with 4 parts of water.

A one litre bottle of orange squash costs £2

Work out the total cost of the bottles of orange squash Jill needs to buy.

(1 litre = 1000 millilitres)

(Total for Question 15 is 5 marks)

Question 104

March 2013 | 5MB2F/01 | Original Q19 | Legacy

19 Work out $\frac{3}{8} + \frac{1}{2}$

.....

(Total for Question 19 is 2 marks)

2 Use your calculator to work out

(a) 5.7×6.3

.....

(1)

(b) $\sqrt{1.44}$

.....

(1)

(c) 1.9^3

.....

(1)

(d) $\frac{1}{0.625}$

.....

(1)

(Total for Question 2 is 4 marks)

3 (a) Change 300 cm to m.

..... m
(1)

(b) Change 5800 g to kg.

..... kg
(1)

(c) Change 8.5 cm to mm.

..... mm
(1)

(Total for Question 3 is 3 marks)

Question 107

5 Jo buys

120 bunches of daffodils for a total of £80
and 80 bunches of tulips for a total of £50

Jo then sells the flowers in a market.

In the morning, Jo sells

75 bunches of the daffodils for 80p a bunch
and 50 bunches of the tulips for 90p a bunch.

In the afternoon, Jo sells all the bunches of flowers she has left for 20p a bunch.

Does Jo make a profit?
You must show all your working.

.....

(Total for Question 5 is 4 marks)

Question 108

***7** Tony runs to keep fit.
He wants to run a total of 20 km each week.

Here are the distances Tony ran last week.

6.25 km 4 km 750 metres $8\frac{1}{2}$ km

Did Tony run 20 km last week?
You must show how you got your answer.

(Total for Question 7 is 3 marks)

9 Stephen is making soup.

He mixes one packet of soup with water to make 6 litres of soup.

Stephen has to make 90 bowls of soup.
He wants to put 0.2 litres of soup into each bowl.

How many packets of soup does Stephen need?

..... packets

(Total for Question 9 is 3 marks)

10 Logan says,

"140 millilitres is more than 1.2 litres".

Is he right?
You must explain your answer.

.....

.....

.....

(Total for Question 10 is 2 marks)

11 Here is part of Gary's electricity bill.

Electricity bill	
Old reading	New reading
6214 units	8650 units

(a) Work out the number of units of electricity Gary used.

..... units
(1)

Each unit of electricity costs 11p.

(b) Work out the cost of the electricity Gary used.

.....
(3)

(Total for Question 11 is 4 marks)

1 (a) Write the number **seven thousand and twenty five** in figures.

.....

(1)

(b) Write the number 9450 in words.

.....

(1)

(c) Write the number 28.75 to the nearest whole number.

.....

(1)

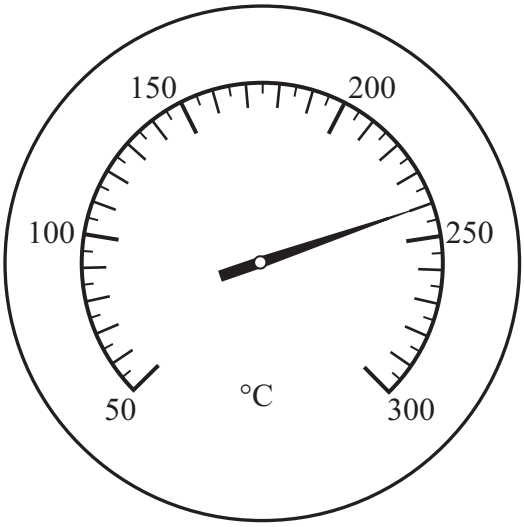
(d) Write the number 7380 to the nearest thousand.

.....

(1)

(Total for Question 1 is 4 marks)

3 The diagram shows the temperature in an oven.

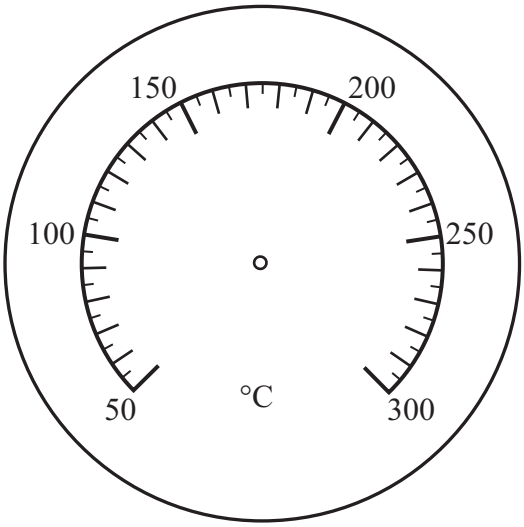


(a) Write down the temperature.

..... °C

(1)

(b) On the diagram below, draw an arrow to show a temperature of 125 °C.



(1)

Lorna switches her oven on at 5.50 pm.
She sets the temperature at 180 °C.
It takes 15 minutes for the oven to reach a temperature of 180 °C.

(c) What time will the oven reach a temperature of 180 °C?

.....

(1)

(Total for Question 3 is 3 marks)

6 72 people are on a bus.
15 people get off the bus.
9 people get on the bus.

How many people are now on the bus?

.....

(Total for Question 6 is 2 marks)

7 Mrs Clark shares £20 between Sally, Bethan, Robert and Tom.

Mrs Clark gives £6.65 to Sally.
She shares the rest of the money equally between Bethan, Robert and Tom.

How much money does Mrs Clark give to Bethan?

£.....

(Total for Question 7 is 3 marks)

13 The table shows the temperature every four hours one day in December.

Time	Temperature
2 am	6 °C
6 am	−4 °C
10 am	−2 °C
2 pm	8 °C
6 pm	5 °C
10 pm	−1 °C

(a) Write down the time with the lowest temperature.

.....

(1)

(b) Work out the difference between the temperature at 2 pm and the temperature at 6 pm.

..... °C

(1)

Between 10 pm and midnight the temperature goes down 5 °C.

(c) Work out the temperature at midnight.

..... °C

(2)

(Total for Question 13 is 4 marks)

17 (a) (i) Work out $3.2^2 + \sqrt{7.5}$

Write down all the figures from your calculator display.

.....

(ii) Write your answer to (a)(i) correct to 2 significant figures.

.....

(2)

(b) Work out the value of 10^5

.....

(1)

(Total for Question 17 is 3 marks)

3 The table shows some information about 6 caravans in a holiday park.

Caravan Name	Sleeps	Sea view	DVD player	Weekly hire price
Chestnut	8	No	No	£709
Seal	4	Yes	Yes	£579
Puffin	6	Yes	Yes	£629
Tern	5	Yes	No	£539
Heron	4	No	Yes	£519
Pearl	4	No	Yes	£449

(a) Write down the number of caravans that sleep 6 people or more than 6 people.

.....

(1)

(b) Write down the names of the caravans with a Sea view **and** a DVD player.

.....

(1)

Mike wants to hire a caravan that sleeps exactly 4 people.

(c) Work out the difference between the highest weekly hire price and the lowest weekly hire price he could pay.

£.....

(2)

Each caravan has a width of 12 feet.

(d) Use 1 foot = 30 centimetres to work out the width of a caravan.

Give your answer in metres.

..... metres

(3)

(Total for Question 3 is 7 marks)

4 At 7 am the temperature was –3 °C.
By noon the temperature was 11 °C higher.

(a) Write down the temperature at noon.

..... °C
(1)

At 9 pm the temperature was –5 °C.
By midnight the temperature had gone down by 7 °C.

(b) Write down the temperature at midnight.

..... °C
(1)

(Total for Question 4 is 2 marks)

Question 120

5 There is enough space for 80 boxes of cornflakes in a stockroom.

On Monday there are 65 boxes of cornflakes in the stockroom.
On Tuesday 17 boxes of cornflakes are taken out of the stockroom.
On Wednesday 29 boxes of cornflakes are put into the stockroom.

Work out how many more boxes of cornflakes can now be put into the stockroom.

.....

(Total for Question 5 is 3 marks)

6 Here is part of a railway timetable.

New Street	10 13	10 30	10 33
Marston Green	10 26	↓	10 41
Birmingham International	10 29	10 39	10 45
Hampton-in-Arden	10 32	↓	10 48
Tile Hill	10 40	↓	10 55
Coventry	10 47	10 49	11 00

(a) Work out how long the 10 13 train takes to go from New Street to Coventry.

..... minutes
(1)

Harry is at Birmingham International.
He needs to be at Tile Hill by 11 00

(b) What time is the latest train from Birmingham International he can catch?

.....
(1)

(Total for Question 6 is 2 marks)

Question 122

7 Jack is 1.78 m tall.
Amy is 5 cm taller than Jack.

How tall is Amy?

.....

(Total for Question 7 is 2 marks)

***11** Here are the costs of pens in two shops.

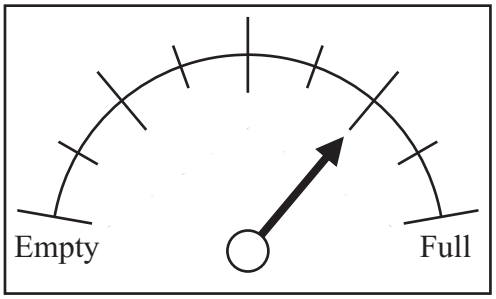
Shop A	Shop B
3 pens for £2	5 pens for £3

Mrs Evans wants to buy 30 pens for the cheapest possible cost.

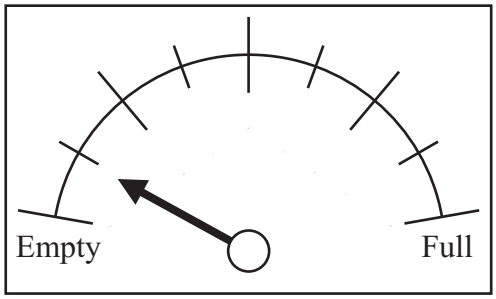
Which shop should she buy the pens from?
You must show all your working.

(Total for Question 11 is 4 marks)

12 The diagram shows a car fuel gauge at the start of a journey and at the end of the journey.



Start



End

There are 80 litres of fuel in the fuel tank when it is full.

(a) Work out how many litres of fuel the car used on this journey.

..... litres

(3)

On a different journey, the car went 180 kilometres.
The car went 15 kilometres for each litre of fuel used.

(b) How many litres of fuel did the car use?

..... litres

(2)

(Total for Question 12 is 5 marks)

19 One kilogram of cheese costs £5.60
Jane buys 200 g of cheese.

Work out how much Jane pays.

£.....

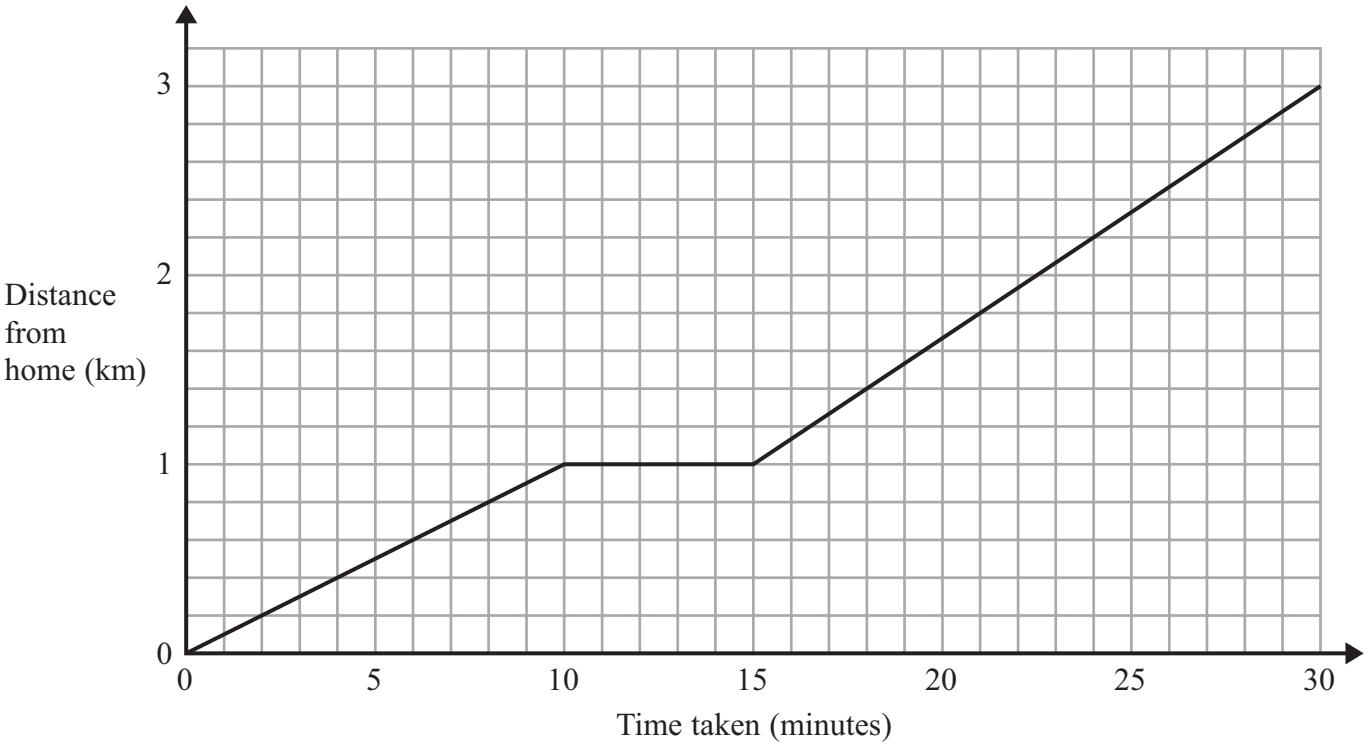
(Total for Question 19 is 3 marks)

22 On Monday, Holly walked from her home to school.
She stopped at her friend's house on the way to school.

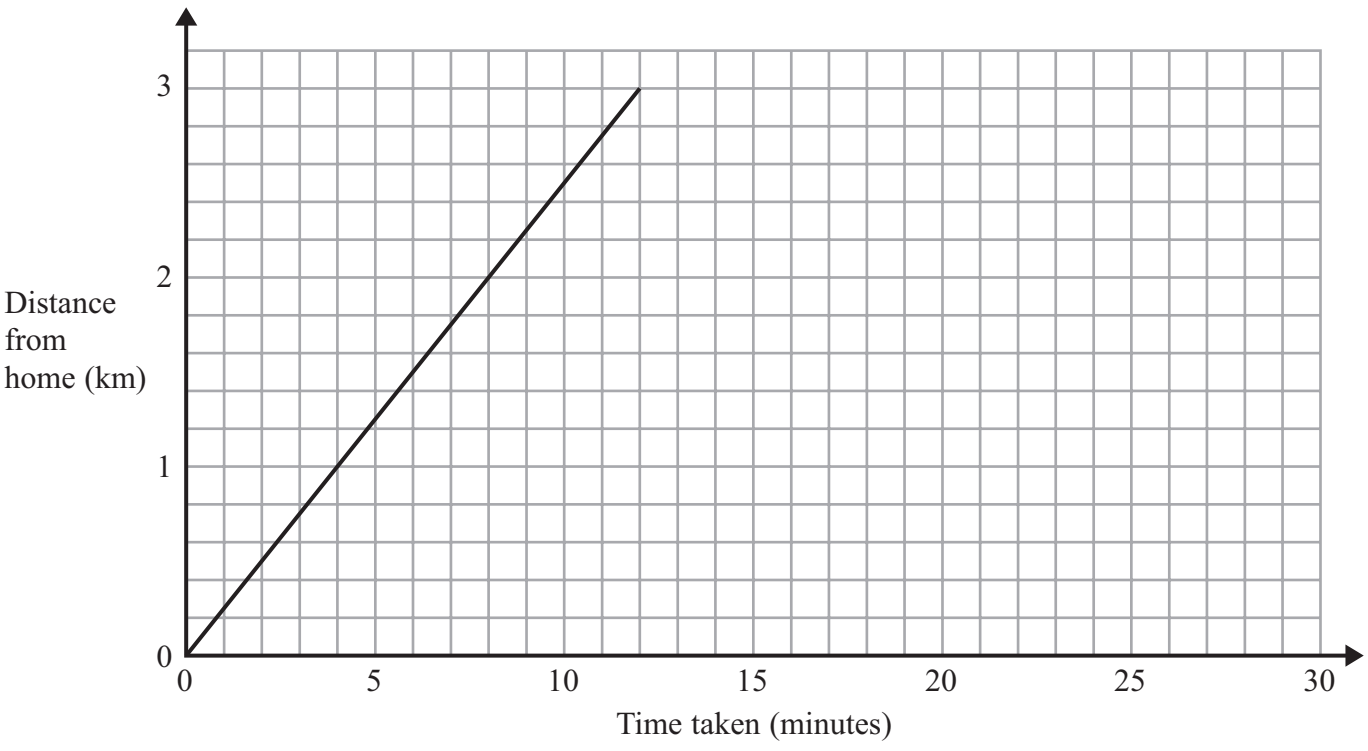
On Tuesday, Holly cycled from her home to school.

The travel graphs show Holly's journey on Monday and on Tuesday.

Monday



Tuesday



(a) Write down the distance from Holly's home to school.

..... km
(1)

(b) Write down how long Holly stopped at her friend's house on Monday.

..... minutes
(1)

Holly took less time to get to school on Tuesday than on Monday.

(c) How many minutes less?

..... minutes
(2)

(Total for Question 22 is 4 marks)

1 (a) Write the number **two thousand and eighty five** in figures.

.....

(1)

(b) Write the number 5108 in words.

.....

(1)

(c) Write down the value of **9** in the number 2.96

.....

(1)

(d) Write down 157 correct to the nearest 10

.....

(1)

(Total for Question 1 is 4 marks)

2 Complete this table.
Write a sensible unit for each measurement.

	Metric	Imperial
The length of a pencil	centimetres	.....
The weight of a tomato	.....	ounces
The amount of milk in a bottle	.....	pints

(Total for Question 2 is 3 marks)

7 The diagram shows the distances, in kilometres, between some towns, by road.

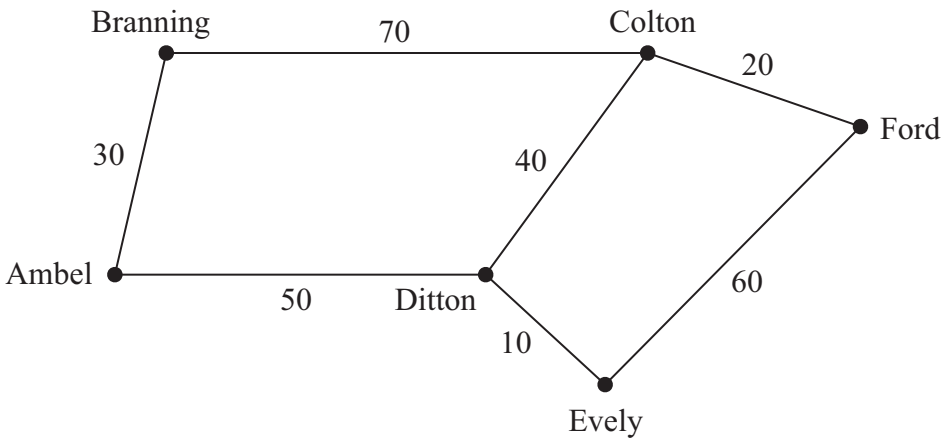


Diagram **NOT** accurately drawn

Work out the shortest distance between Ambel and Ford by road.

..... km

(Total for Question 7 is 2 marks)

17 Robert and his family are going on holiday to France.

A bank gives Robert this chart to help him to change between pounds (£) and euros (€).

pounds (£)		euros (€)
1	=	1.2
2	=	2.4
5	=	6.0
10	=	12.0
20	=	24.0
50	=	60.0
100	=	120.0

Robert changes £600 into euros (€).

(a) How many euros should Robert get?

€.....

(2)

In France, a laptop costs €540
In England, the same laptop costs £460

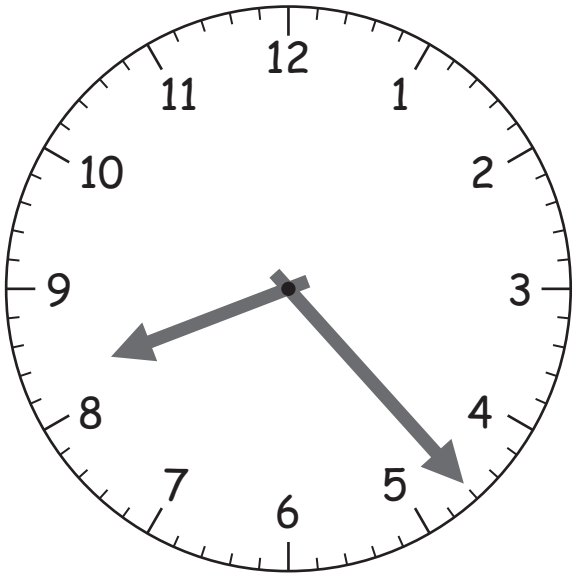
(b) Work out the difference between the cost of the laptop in France and the cost of the laptop in England.
You must show clearly how you got your answer.

.....

(3)

(Total for Question 17 is 5 marks)

3



(a) Write down the time shown on the clock.

.....

(1)

Lisa got on a bus at 08 45
Lisa got off the bus at 10 20

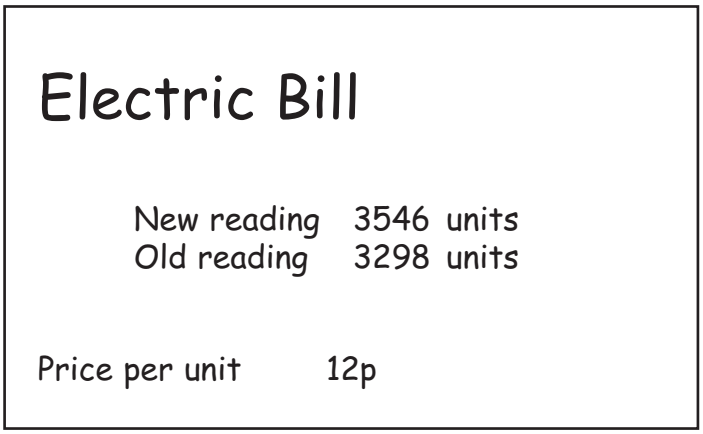
(b) How long was Lisa on the bus?

.....

(2)

(Total for Question 3 is 3 marks)

***8** Here is part of Sheila's electric bill.



Work out how much Sheila has to pay for the units of electricity she used.

(Total for Question 8 is 4 marks)

9 The table gives some information about fridges and freezers.

	Make	Energy rating	Frost-free	Capacity	Cost
Fridge	Beco	C	No	4 cu ft	£95
Freezer	Filips	A	Yes	4 cu ft	£115
Fridge	Dandy	B	Yes	6 cu ft	£122
Freezer	Beco	B	Yes	6 cu ft	£125
Fridge	Dandy	C	No	8 cu ft	£165
Freezer	Filips	B	No	8 cu ft	£145

Rashmi wants to buy one of these fridges and one of these freezers.

He wants a fridge with a capacity of more than 5 cu ft.
The fridge must be frost-free.

Rashmi wants a freezer with an energy rating of A or B.
The freezer must have a capacity of 8 cu ft.

Work out the total cost of the fridge and the freezer.

£ .....

(Total for Question 9 is 2 marks)

Question 134

1 (a) Write the number 3460 in words.

.....

(1)

(b) Write the number 258 correct to the nearest hundred.

.....

(1)

(c) Write these numbers in order of size.
Start with the smallest number.

6.37 6.5 6.48 6.04 6.59

.....

(1)

(Total for Question 1 is 3 marks)

4 The table shows the minimum temperature on each of six days in January.

	Mon	Tues	Wed	Thurs	Fri	Sat
Minimum temperature	5 °C	–1 °C	–2 °C	–3 °C	–3 °C	–4 °C

(a) Write down the lowest temperature.

..... °C

(1)

(b) Work out the difference between the temperature on Tuesday and the temperature on Saturday.

..... °C

(1)

On Sunday, the temperature was 8 °C higher than the temperature on Saturday.

(c) Work out the temperature on Sunday.

..... °C

(1)

(Total for Question 4 is 3 marks)

10 Here is part of a train timetable from Stamford to Stansted Airport.

Stamford	08 59	09 59	10 59	11 59
Peterborough	09 18	10 18	11 18	12 18
Ely	09 53	10 53	11 53	12 53
Cambridge	10 08	11 08	12 08	13 08
Stansted Airport	10 45	11 45	12 45	13 45

A train leaves Stamford at 08 59

(a) At what time should this train get to Cambridge?

.....

(1)

David gets to Ely station at 10 25
He wants to catch a train to Cambridge.

(b) How many minutes should David have to wait?

..... minutes

(1)

Janet needs to get to Stansted Airport **before** 13 00
She is going to catch a train from Peterborough.

(c) Write down the time of the latest train Janet can catch from Peterborough.

.....

(1)

(Total for Question 10 is 3 marks)

Question 137

1 (a) Work out 6.7^2

.....

(1)

(b) Find $\sqrt{13.69}$

.....

(1)

(Total for Question 1 is 2 marks)

*6 The diagram shows the distances by road between five towns A, B, C, D and E.

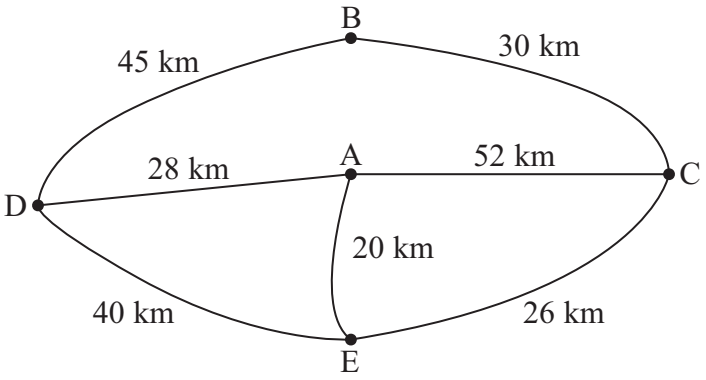


Diagram **NOT** accurately drawn

Amir delivers computers.

He starts at town A.
He delivers computers to each of four towns B, C, D and E.
He finishes at town A.

Amir wants to drive the shortest distance to deliver all the computers.

Work out the shortest distance.
You must show all your working.

(Total for Question 6 is 4 marks)

9 On Monday morning, Shruti has £135.70 in her bank account.

On Monday, Shruti

puts £85 into her bank account
spends £45.56 from her bank account

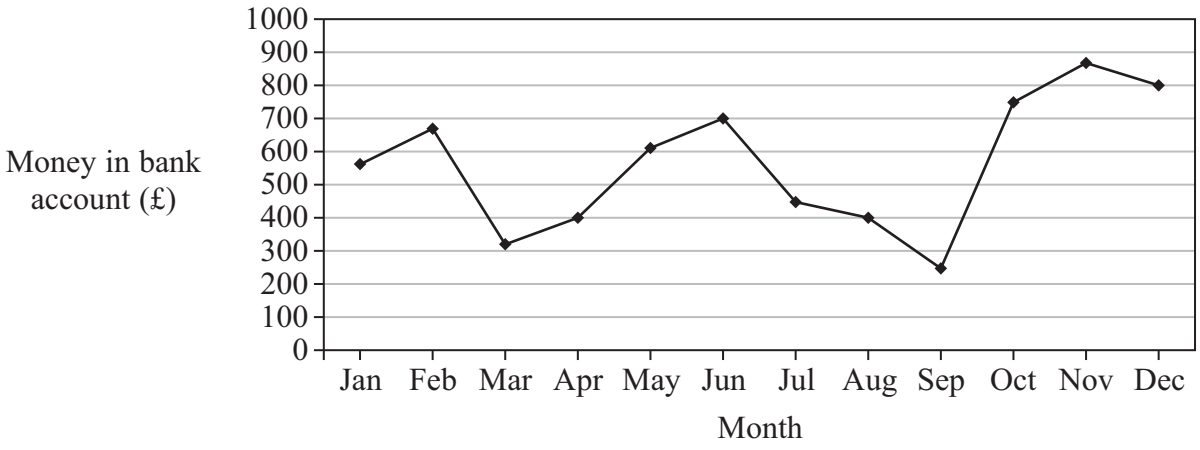
(a) How much money is in Shruti's bank account at the end of Monday?

£.....

(3)

Shruti wants to find out how much money was in her bank account at the beginning of each month for the last twelve months.

This graph shows this information.



(b) How much money was in Shruti's bank account at the beginning of June?

£.....

(1)

(c) At the beginning of which month was there the most money in Shruti's bank account?

.....

(1)

(d) At the beginning of which **two** months was there the same amount of money in Shruti's bank account?

..... and .....

(1)

(Total for Question 9 is 6 marks)

11 Michael sells cans of drink in his shop.

The cans of drink are delivered in boxes to the shop.
There are 24 cans of drink in a box.

On Tuesday morning, Michael had no cans of drink in the shop.
On Tuesday afternoon, 18 boxes of cans of drink were delivered to the shop.

When the shop closed on Tuesday, Michael had 15 cans of drink left.

How many cans of drink did Michael sell on Tuesday?

.....

(Total for Question 11 is 3 marks)

14 Tracy uses this rule to work out the cost, in pounds, of printing invitations.

Cost = number of invitations × 1.25 + 4

(a) Work out the cost of printing 20 invitations.

£.....

(2)

Martin uses the same rule to work out the cost of printing invitations.
The cost is £47.75

(b) Work out how many invitations Martin had printed.

.....

(3)

(Total for Question 14 is 5 marks)

Question 142

***16** Mr Jones uses 730 units of electricity.

He pays

24p per unit for the first 130 units of electricity he uses
13p per unit for the rest of the units of electricity he uses

Work out the total amount of money Mr Jones pays.
You must show all your working.

(Total for Question 16 is 4 marks)

1 Mary buys three tickets for a theatre show.
Each ticket costs £50

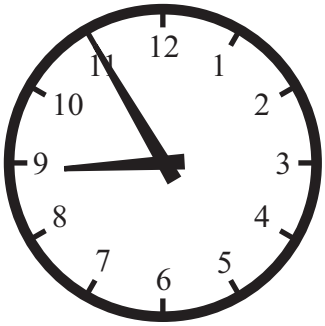
Mary also has to pay a booking fee.
The booking fee is £2.50 per ticket.

Work out the total amount Mary has to pay.

£.....

(Total for Question 1 is 3 marks)

3 Here is a clock in a school.



(a) (i) School starts 15 minutes earlier than the time shown on the clock.

What time does school start?

.....

(ii) The first lesson ends 45 minutes after the time shown on the clock.

What time does the first lesson end?

.....

(2)

(b) School finishes at 3.20 pm.

Write 3.20 pm using the 24-hour clock.

.....

(1)

(Total for Question 3 is 3 marks)

4 $a = 5$
$b = 3$

Work out the value of $4a + 2b$

.....

(Total for Question 4 is 2 marks)

5 Here are four digits.

8 2 4 3

(a) (i) Use two of these digits to make the smallest possible two-digit number.

.....

(ii) Use three of these digits to make the three-digit number closest to 300

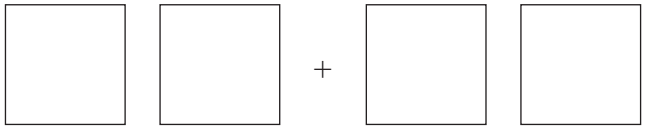
.....

(2)

Here are four different digits.

5 1 7 9

(b) (i) Put one digit in each box to make the largest total.
You may only use each digit once.



(ii) Write down the total.

.....

(2)

(Total for Question 5 is 4 marks)

8 (a) Work out $15 \div 5 + 7$

.....

(1)

(b) Work out $2 + 7 \times 2$

.....

(1)

(c) Work out $-5 + -6$

.....

(1)

(d) Work out $14 - -3$

.....

(1)

(e) Add brackets ( ) to make this statement correct.

$$12 - 2 \times 3 + 1 = 4$$

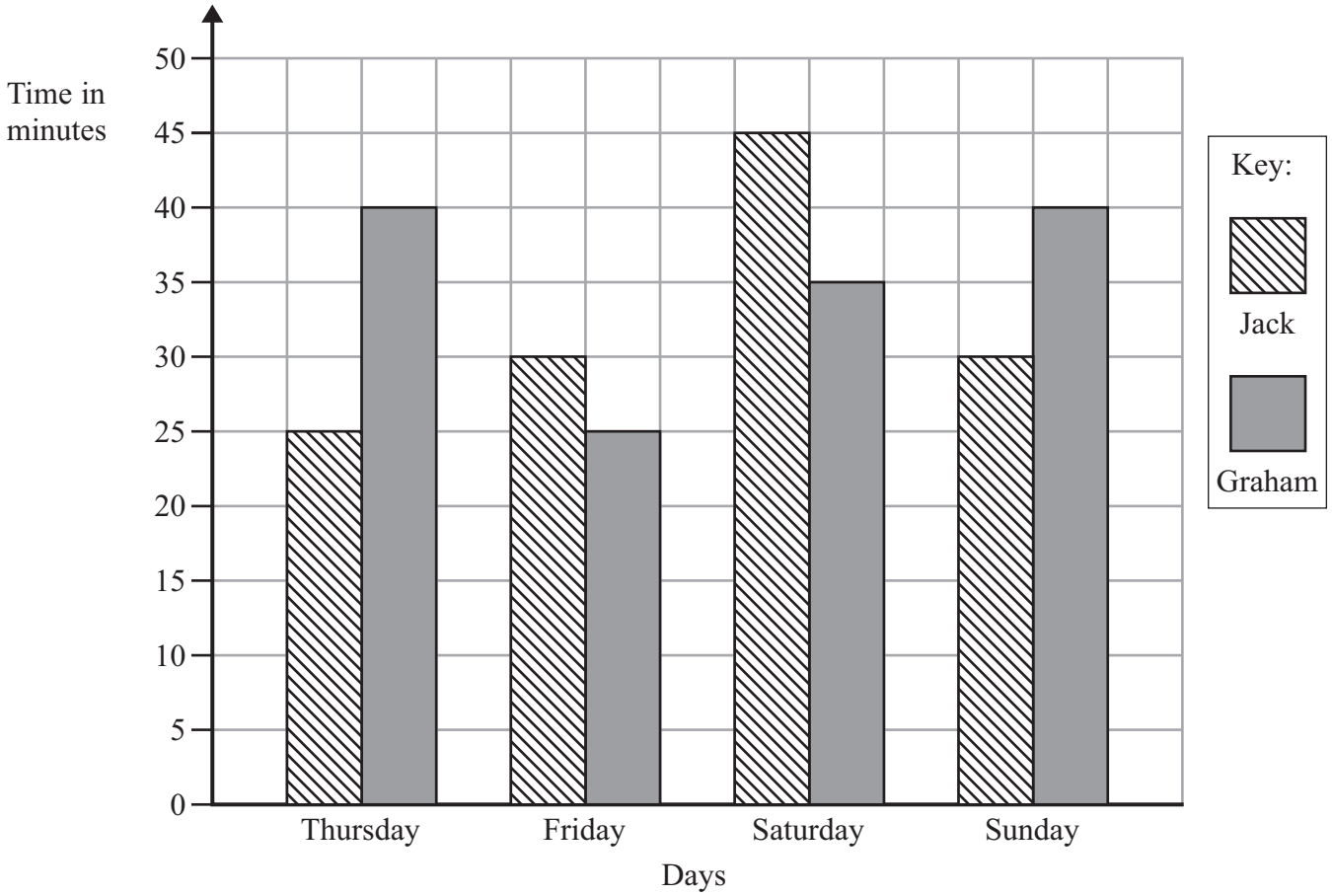
(1)

(f) Why does $\frac{1}{4} = \frac{2}{8}$?

(1)

(Total for Question 8 is 6 marks)

9 Jack and Graham each recorded the time, in minutes, they each spent sending messages on Thursday, on Friday, on Saturday and on Sunday last week.



(a) How many minutes did Graham spend sending messages on Saturday?

..... minutes

(1)

(b) On which day did Jack spend exactly 25 minutes sending messages?

.....

(1)

*(c) Who spent the greater total time sending messages?
You must show your working.

(3)

(Total for Question 9 is 5 marks)

14 (a) Measure the length of the line PQ.

Give your answer in centimetres.



..... cm

(1)

(b)

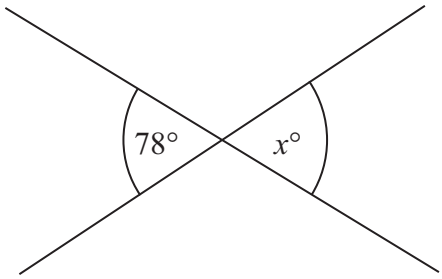


Diagram **NOT** accurately drawn

(i) Write down the value of x.

$x =$ .....

(ii) Give a reason for your answer.

.....

.....

(2)

(Total for Question 14 is 3 marks)

***15** Aleena is planning a trip for people at her Youth Club.

Here are the costs for the trip.

Transport	£230
Insurance	£50
Other costs	£30
Entry fee	£14 per person

Aleena charges £18 per ticket for the trip.
She sells 100 tickets.

Is there enough money from the ticket sales for Aleena to pay all the costs for the trip?
You must show your working.

(Total for Question 15 is 4 marks)

Question 151

17 Write these numbers in order of size.
Start with the smallest number.

0.6 $\quad \frac{2}{3} \quad$ 65% $\quad 0.606$

.....

(Total for Question 17 is 2 marks)

27 Rita is going to make some cheeseburgers for a party.
She buys some packets of cheese slices and some boxes of burgers.

There are 20 cheese slices in each packet.
There are 12 burgers in each box.

Rita buys exactly the same number of cheese slices and burgers.

(i) How many packets of cheese slices and how many boxes of burgers does she buy?

..... packets of cheese slices

..... boxes of burgers

Rita wants to put one cheese slice and one burger into each bread roll.
She wants to use all the cheese slices and all the burgers.

(ii) How many bread rolls does Rita need?

..... bread rolls

(Total for Question 27 is 4 marks)

Question 153

1 (a) Write the number **three thousand five hundred and two** in figures.

.....

(1)

(b) Write the number 2019 in words.

.....

(1)

(c) Write down the value of the **7** in the number 4571

.....

(1)

(d) Write 6718 correct to the nearest hundred.

.....

(1)

(Total for Question 1 is 4 marks)

3 The table shows some information about seven different mobile phones.

Mobile phone	Price (£)	Weight (g)	Camera	Music player	Radio
Sonsang A125	40	88	yes	yes	yes
Sonsang A220	25	95	no	no	yes
Sonsang A335	10	102	no	no	no
PK 340	42	92	yes	yes	yes
PK 390	35	100	no	yes	yes
Nota M1	25	90	yes	yes	no
Nota M8	38	77	yes	yes	yes

(a) Write down the name of the most expensive mobile phone.

.....

(1)

(b) Write down the price of the cheapest mobile phone that has a music player and a radio.

£.....

(1)

(c) Work out the difference between the weight of the heaviest mobile phone and the weight of the lightest mobile phone.

..... g

(2)

(Total for Question 3 is 4 marks)

5 A film starts at 17 50
The film ends at 19 30

(a) How long does the film last?

.....

(2)

Jackie buys some tickets to see the film.
Each ticket costs £4.50
Jackie pays with two £20 notes.

Jackie gets £8.50 change.

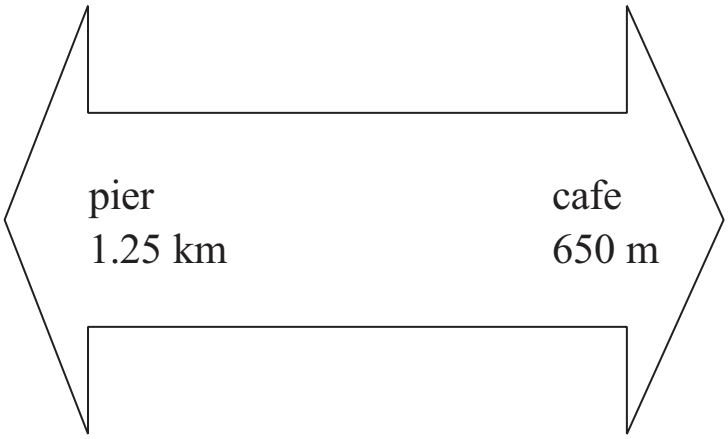
(b) How many tickets did Jackie buy?

.....

(3)

(Total for Question 5 is 5 marks)

9 John is walking along a path.
He sees this sign.



How far is it from the pier to the cafe along the path?

.....

(Total for Question 9 is 3 marks)

21 Linda is buying wool to knit a baby's blanket.
She needs 1800 yards of wool.

Linda chooses some balls of wool.
There are 245 metres of wool in each ball of wool.

Linda knows that

1 yard is 36 inches
1 inch is 2.54 centimetres

How many balls of wool does Linda need to buy?
You must show all your working.

.....

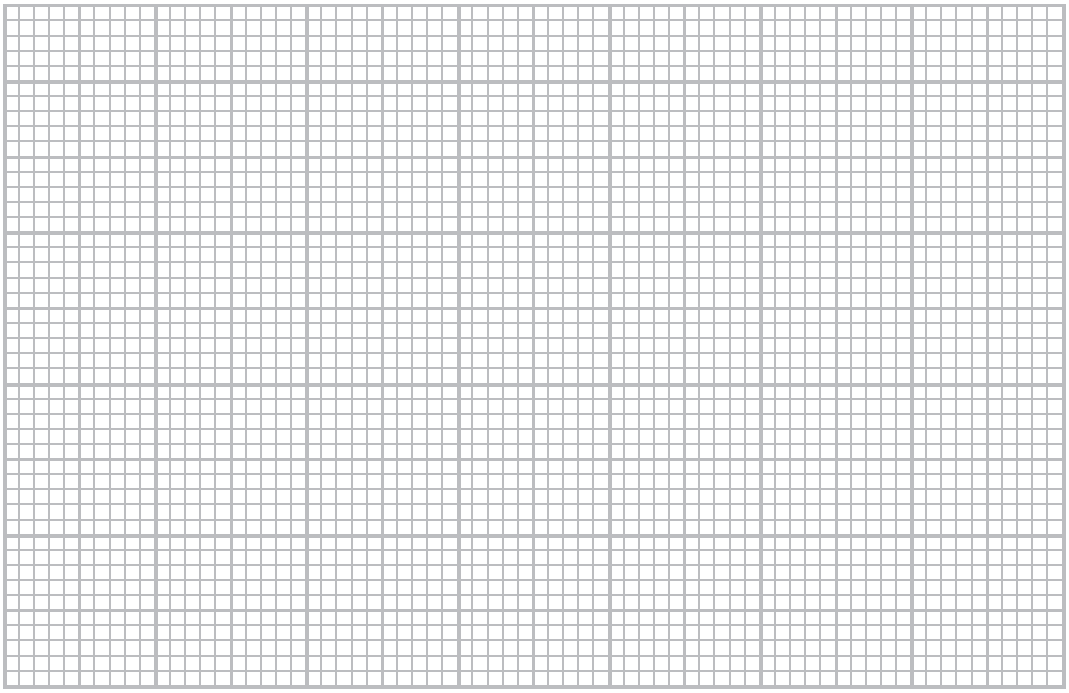
(Total for Question 21 is 4 marks)

*3 Harry and Shamus recorded the number of minutes they each spent watching TV on Monday to Thursday last week.

The table shows information about their results.

	Monday	Tuesday	Wednesday	Thursday
Harry	35	30	25	20
Shamus	10	20	25	40

(a) Show this information in a suitable diagram.



(4)

(b) Compare the numbers of minutes Harry and Shamus each spent watching TV on Monday to Thursday last week.
Write down two comparisons.

1 .....

.....

2 .....

.....

(2)

(Total for Question 3 is 6 marks)

4 The diagram shows the cost of a bag of soil and the cost of a box of seeds.



Kate buys two bags of soil and three boxes of seeds.

She gets $\frac{1}{4}$ off the total cost.

Kate pays with a £20 note.

How much change should Kate get?

£ .....

(Total for Question 4 is 4 marks)

***6** Jasmine wants to record a film on a DVD.
The film is 95 minutes long.

Jasmine's DVD has $1\frac{1}{2}$ hours of recording time left.

Can Jasmine record all of the film on this DVD?

You must show your working.

(Total for Question 6 is 2 marks)

Question 161

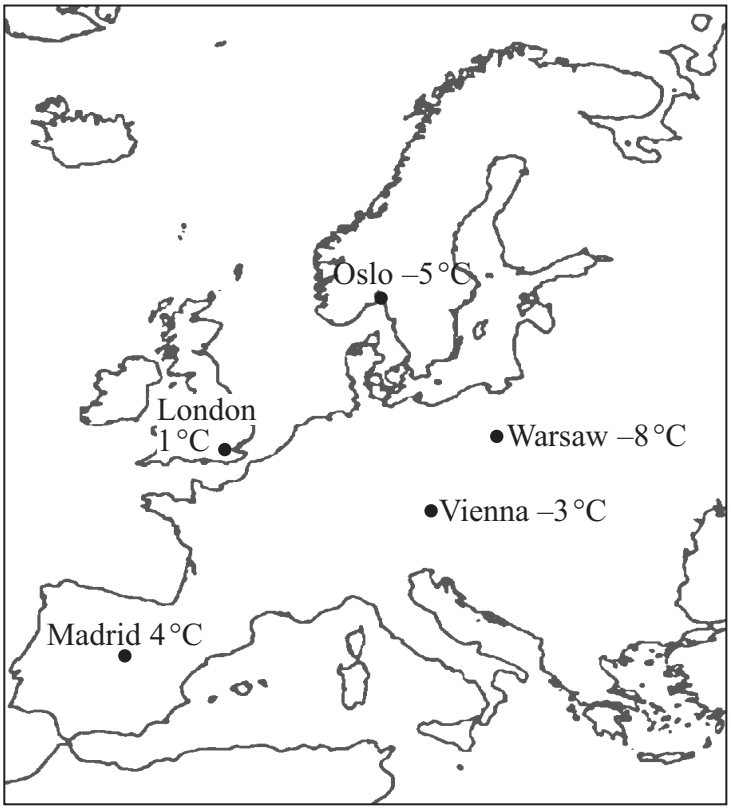
2 There will be 30 people at a party.
There have to be enough chairs and tables for all 30 people.
There will be 4 chairs at each table.

What is the least number of tables needed?

.....

(Total for Question 2 is 2 marks)

7 Here is a map.



The map shows the temperatures in 5 cities at midday.

(a) Which city has the lowest temperature?

.....

(1)

(b) Work out the difference between the temperature in Oslo and the temperature in London.

.....°C

(1)

By midnight, the temperature in Madrid had gone down by 7 °C.

(c) Work out the temperature in Madrid at midnight.

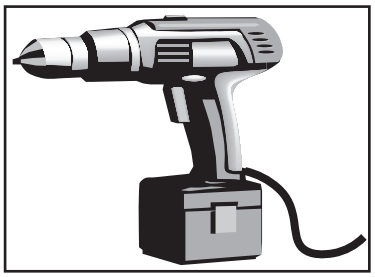
.....°C

(1)

(Total for Question 7 is 3 marks)

9 You can use this rule to work out the cost, in pounds, of hiring a drill.

To find the cost in pounds Multiply the number of days hired by 8 and then add 20



Janice hires a drill for 3 days.

(a) Work out the cost.

£.....

(2)

Karim hires the drill for 6 days.
Janice says

"It will cost you twice as much as it cost me."

(b) Is Janice right?

You must show how you got your answer.

.....

.....

.....

.....

(2)

(Total for Question 9 is 4 marks)

***13** The normal price of a denim shirt at a shop is £9.60

On Special Offer Day, there is $\frac{1}{3}$ off the normal price.

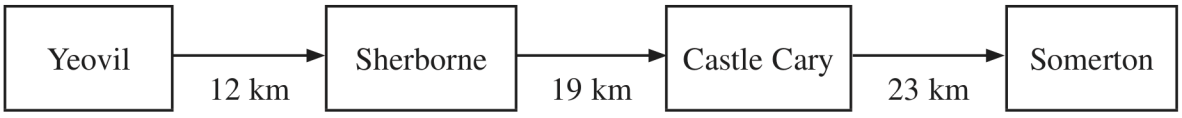


Billy has £13
Has he enough money to buy two denim shirts on Special Offer Day?
You must show all your working.

(Total for Question 13 is 4 marks)

2 The diagram shows the distances between some places on a cycle route.

Diagram **NOT** accurately drawn



(a) Work out the total distance along the route from Yeovil to Somerton.

..... km
(2)

Along the route, the distance from Yeovil to Castle Cary is shorter than the distance from Sherborne to Somerton.

(b) How much shorter?

..... km
(2)

(Total for Question 2 is 4 marks)

6 Samir had 6 boxes of ice lollies to sell.

There were 24 ice lollies in each box.
Samir did **not** sell 17 of the ice lollies.

Work out how many ice lollies Samir sold.

.....

(Total for Question 6 is 3 marks)

***11** Cheryl is selling books and magazines to raise money for charity.
She wants to raise a total of £50

Cheryl sells 46 hardback books for 50p each.
She sells 68 paperback books for 30p each.
She sells magazines for 20p each.

Cheryl has 26 magazines to sell.
Work out if she has enough magazines to sell to reach her £50 target.

(Total for Question 11 is 5 marks)

***16** Brenda works in an office.
She finds out the prices of folders from two companies, Office Deals and Paper World.

Office Deals	Paper World
Packs of 20 folders £10.80	Packs of 15 folders £8.40

Brenda needs to buy exactly 60 folders.
She wants to buy the folders as cheaply as possible.

Which company should Brenda buy the folders from?
You must explain your answer.

(Total for Question 16 is 4 marks)

17 Kelan is packing plates in a wooden box.

The empty box has a weight of 4.3 kg.
Each plate has a weight of 760 g.

When the box is packed with plates, the total weight must **not** be more than 25 kg.

Work out the greatest number of plates Kelan can pack in the box.

.....

(Total for Question 17 is 4 marks)

1 (a) Write these numbers in order of size.
Start with the smallest number.

52 102 25 120 55

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

6 –2 0 –5 3

.....

(1)

(c) Write these numbers in order of size.
Start with the smallest number.

0.63 0.633 0.603 0.6 0.06

.....

(1)

(Total for Question 1 is 3 marks)

3 The table shows some information about the numbers of medals won by Great Britain in the 2012 Olympic Games and in the 2012 Paralympic Games.

	Gold	Silver	Bronze
Olympic Games	29	17	19
Paralympic Games	34	43	43

Great Britain won more medals in total in the Paralympic Games than in the Olympic Games.

How many more medals in total?

.....

(Total for Question 3 is 3 marks)

5 Farah recorded the minimum temperature, in °C, on each of seven days in January.

Here are her results.

Day	Mon	Tues	Wed	Thur	Fri	Sat	Sun
Temp (°C)	–2	–1	2	0	–3	4	7

(a) Work out the difference between the temperature on Tuesday and the temperature on Wednesday.

..... °C

(1)

(b) Work out the mean of the temperatures Farah recorded.

..... °C

(2)

(Total for Question 5 is 3 marks)

6 Here is part of a train timetable from Newcastle to London.

Newcastle	05 56	06 30	07 28
Durham	06 09	06 42	07 41
Darlington	06 28	07 00	07 59
York	06 56	07 33	08 27
Peterborough	08 11	08 41	09 48
London	09 08	09 39	10 45

A train leaves Newcastle at 05 56

(a) What time should this train get to London?

.....

(1)

Matthew gets to the station in Darlington at 06 45
He wants to catch the next train to York.

(b) How many minutes should he have to wait for this train?

..... minutes

(1)

A train leaves Peterborough at 09 48

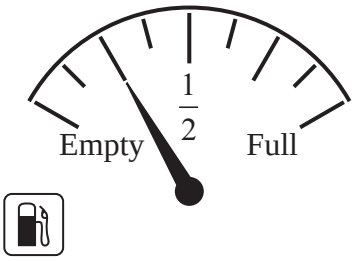
(c) How many minutes should this train take to get from Peterborough to London?

..... minutes

(1)

(Total for Question 6 is 3 marks)

7 A petrol tank holds 48 litres of petrol when it is full.



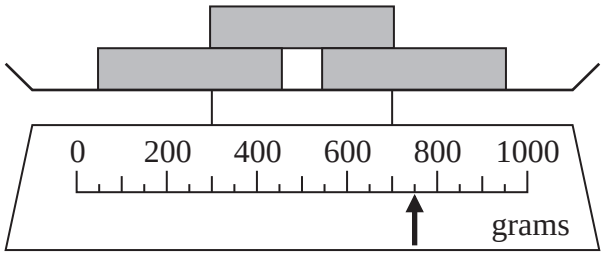
The scale shows information about how much petrol there is in the petrol tank.

(a) Work out the number of litres of petrol in the petrol tank.

..... litres

(2)

The total weight of three boxes is shown on this weighing scale.



Each box has the same weight.

(b) Work out the weight of a box.

..... grams

(3)

(Total for Question 7 is 5 marks)

10 You can use these rules to change temperatures from °C to °F.

approximate rule	Multiply the °C temperature by 2 and then add 30
exact rule	Multiply the °C temperature by 1.8 and then add 32

Amy uses the **approximate rule** to change 20 °C to °F.
Dan uses the **exact rule** to change 20 °C to °F.

(a) Work out the difference between Amy's result and Dan's result.

..... °F
(4)

Jade uses the **approximate rule** to change a temperature from °C to °F.
The result is 110 °F.

(b) What °C temperature did Jade change to °F?

..... °C
(3)

(Total for Question 10 is 7 marks)

13 5600 copies of the Village Advertiser are printed each week.

(a) Write the number 5600 in words.

.....

(1)

People have to pay to have an advert in the Village Advertiser.

Each advert is in the shape of a rectangle.

The table gives information about the cost of having an advert in the Village Advertiser.

Advert size	Size of rectangle	Cost per week
Size 1	44 mm by 27 mm	**£6.50**
Size 2	90 mm by 35 mm	**£13.50**
Size 3	90 mm by 60 mm	**£20.00**
Size 4	90 mm by 125 mm	**£33.00**

A Size 2 advert is a 90 mm by 35 mm rectangle.

(b) In the space below, draw a 90 mm by 35 mm rectangle.

(2)

David has this advert in the Village Advertiser for **2 weeks**.
The advert is accurately drawn.

Guitar Lessons
Lessons for beginners
Phone David on
01778 234525

(c) What is the total cost of the advert for 2 weeks?

£.....

(3)

Raja wants to have a Size 2 advert in the Village Advertiser for 8 weeks.
He has £100 to spend.

(d) Show that Raja does **not** have enough money to pay for the advert for 8 weeks.
You must show all your working.

(2)

(Total for Question 13 is 8 marks)

14 A charity made an appeal for money.

The charity put the information shown below on a poster.

Hunger appeal

- £3 will buy 5 meals for one person.
- £100 will buy lunches for 80 school children for 5 days.

£3 will buy 5 meals for one person.

(a) Work out the cost of one of the meals.
Give your answer in pence.

..... p
(2)

£100 will buy lunches for 80 school children for 5 days.

(b) Work out the cost of buying lunch for one school child for one day.

.....
(3)

(Total for Question 14 is 5 marks)

Question 178

19 Work out $\frac{3}{5} - \frac{1}{3}$

.....

(Total for Question 19 is 2 marks)

3 Edwin goes to a restaurant with some friends.

Here are the meals they have

2 fish and chips at £9.25 each
1 chicken and chips at £9.50
1 roast lamb at £10.55
4 puddings at £4.55 each.

Edwin pays for the meals with three £20 notes.

How much change should Edwin get?

£.....

(Total for Question 3 is 3 marks)

Question 180

4 Work out the number that is halfway between 2.9 and 3.6

.....

(Total for Question 4 is 1 mark)

5 28 569 people watch a football match.

(a) Write 28 569 to the nearest hundred.

.....

(1)

(b) Write down the value of the **2** in the number 28 569

.....

(1)

5619 of the 28 569 people are female.

(c) Work out the number of males.

.....

(1)

(Total for Question 5 is 3 marks)

12 Angie is organising a party for 84 adults and 42 children.

At 8 pm all the adults and all the children will sit down at tables for a meal.
6 people will sit at each table.

(a) Work out the number of seats and the number of tables Angie will need.

..... seats

..... tables

(3)

Each adult meal will cost £4.50
Each child meal will cost £2.50

Angie has £500 to pay for the meals.

(b) Does Angie have enough money to pay for the meals for 84 adults and 42 children?
You must show all your working.

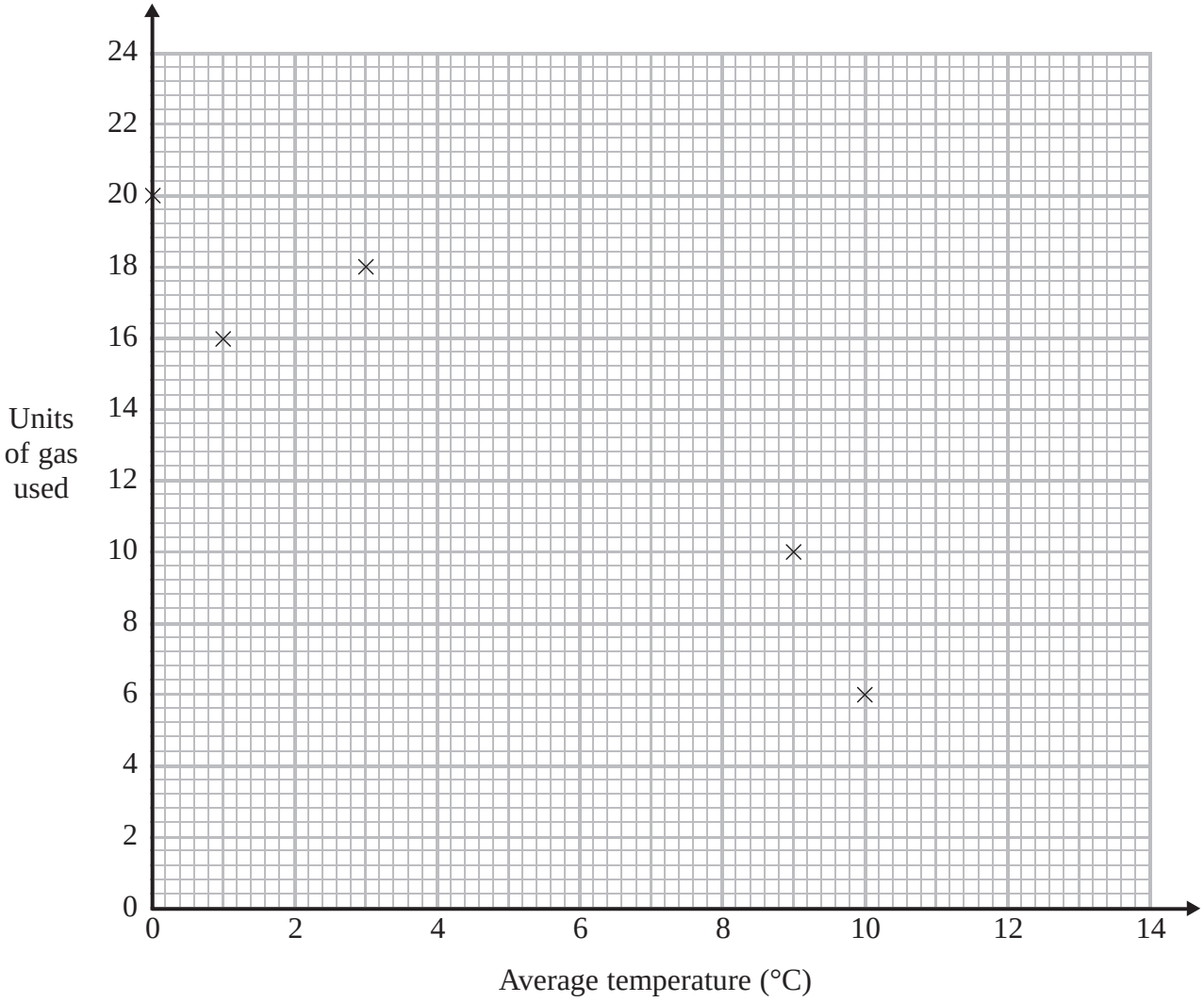
.....

(3)

(Total for Question 12 is 6 marks)

25 The table shows the average temperature on each of seven days and the number of units of gas used to heat a house on these days.

Average temperature (°C)	0	1	3	9	10	12	13
Units of gas used	20	16	18	10	6	6	2



(a) Complete the scatter graph to show the information in the table.
The first 5 points have been plotted for you.

(1)

(b) Describe the relationship between the average temperature and the number of units of gas used.

.....

.....

(1)

(c) Estimate the average temperature on a day when 12 units of gas are used.

..... °C

(2)

(Total for Question 25 is 4 marks)

27 $x = 0.7$

Work out the value of $\dfrac{(x+1)^2}{2x}$

Write down all the figures on your calculator display.

.....

(Total for Question 27 is 2 marks)

2 The table shows information about 5 bicycles for sale in a shop.

Name	Price	Weight (kg)	Number of Gears	Frame Size (inches)	Colour
Rushmore	£269	13.5	21	20	white
Bowfell	£379	14.6	24	18	grey
Grisdale	£449	13.8	27	20	white
Fairfield	£499	14.1	27	18	red
Skiddaw	£379	14.8	21	20	orange

(a) How many of these bicycles have a weight less than 14 kg?

.....

(1)

Richard wants to buy one of the bicycles with a frame size of 18 inches.

(b) Write down the colours of the bicycles he could buy.

.....

(1)

Two of the bicycles have the same price.
Leonard wants to buy the one that has the greater number of gears.

(c) Write down the name of the bicycle that Leonard should buy.

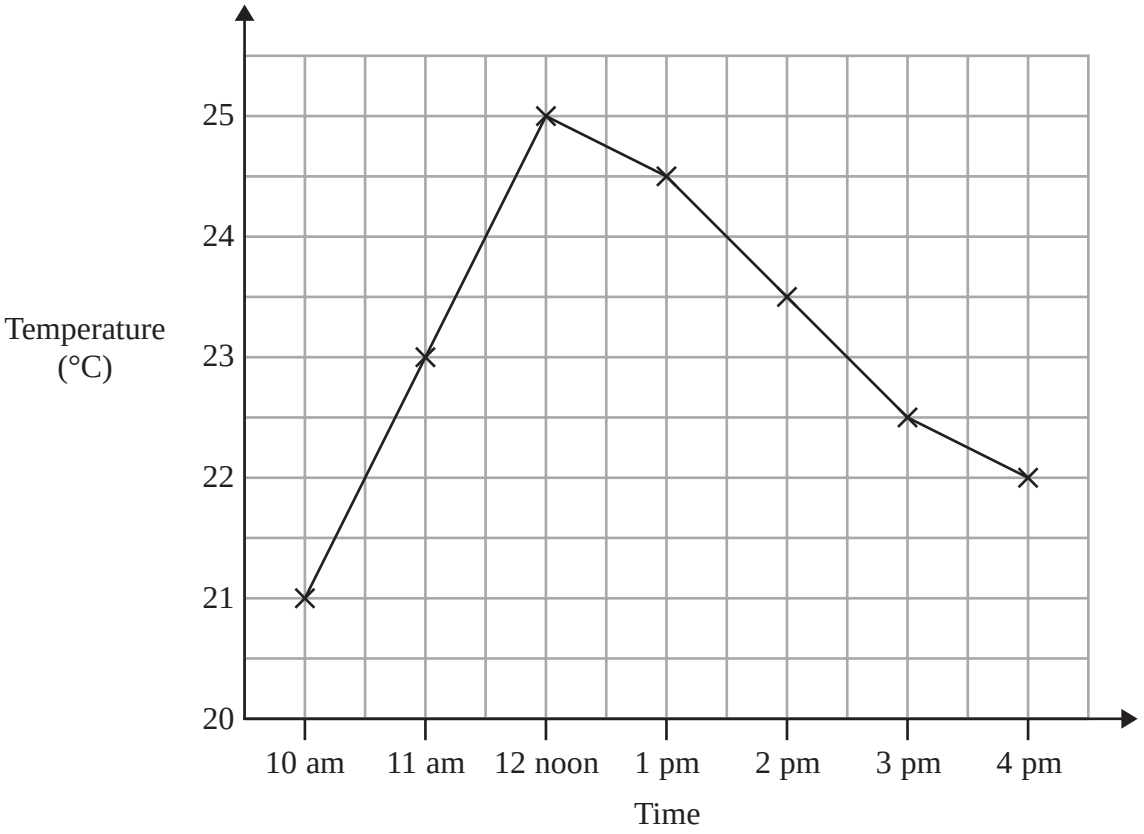
.....

(1)

(Total for Question 2 is 3 marks)

3 Beth recorded the temperature, in degrees (°C), inside her greenhouse every hour on one day.

The graph shows information about her results.



(a) Write down the temperature at 11 am.

..... °C

(1)

(b) Write down the highest recorded temperature.

..... °C

(1)

(c) Describe the change in temperature from 12 noon to 4 pm.

.....

.....

(1)

(Total for Question 3 is 3 marks)

Question 187

***5** Jean is going to the beach.
It takes her 25 minutes to get from her home to the beach.
It takes her 25 minutes to get from the beach to her home.

Jean leaves home at 2.40 pm.
She has to get home by 6 pm.

What is the greatest length of time Jean can stay at the beach?

.....

(Total for Question 5 is 4 marks)

***10** The table shows information about the cost of hiring a cement mixer from two companies.

Cost of hiring cement mixer			
Company	**First day**	**Each extra day**	**Delivery and collection**
Quick Mix	£13.50	£6.90	Free
Speedy Hire	£7.20	£7.20	£5.90

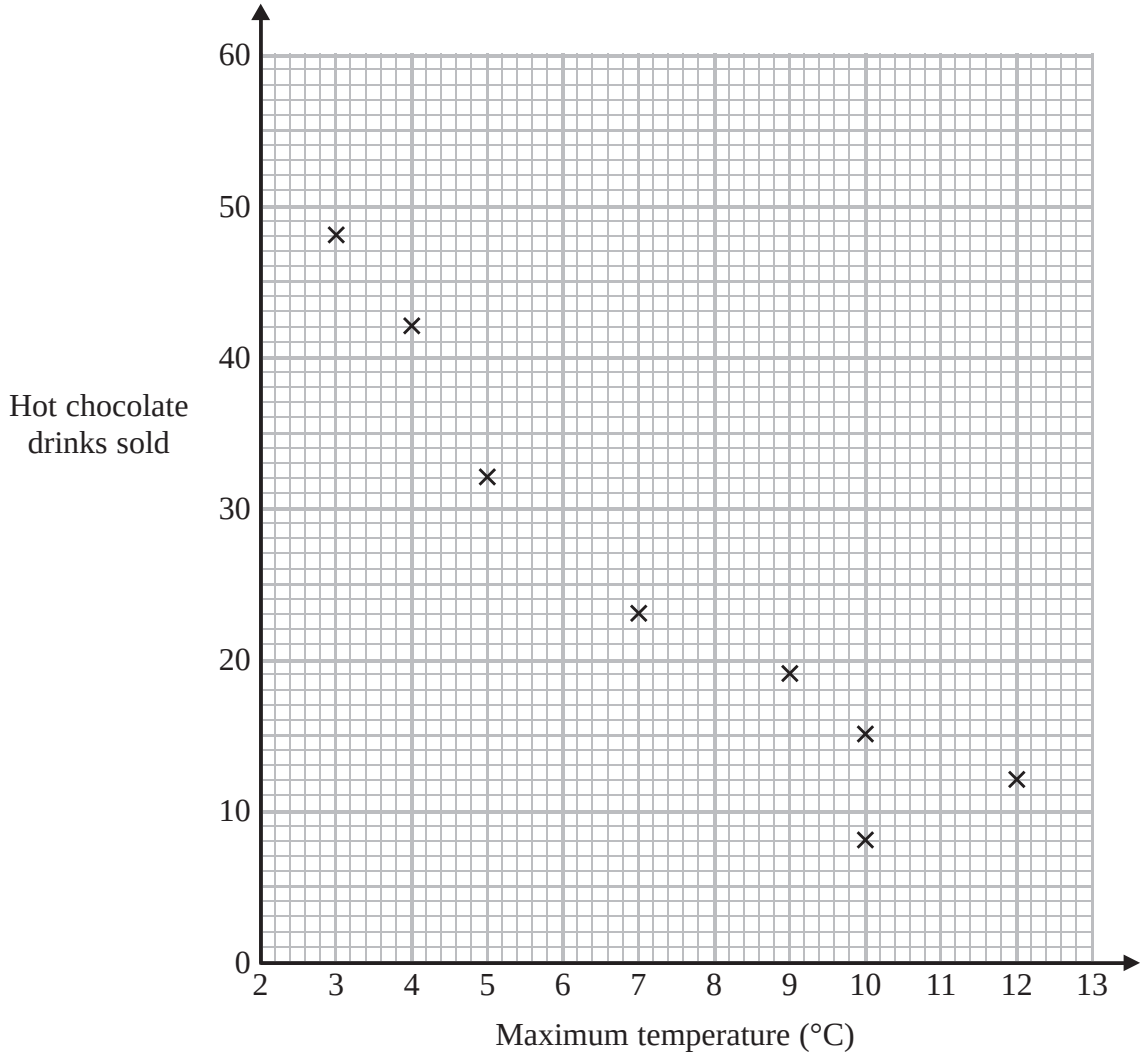
Chris wants to hire a cement mixer for 5 days.
He will hire the cement mixer from either Quick Mix or Speedy Hire.
Chris wants to pay the least amount of money.

Which company should he choose?
You must show all your working.

(Total for Question 10 is 4 marks)

14 Carlos has a cafe in Clacton.
Each day, he records the maximum temperature in degrees Celsius (°C) in Clacton and the number of hot chocolate drinks sold.

The scatter graph shows this information.



On another day the maximum temperature was 6 °C and 35 hot chocolate drinks were sold.

(a) Show this information on the scatter graph.

(1)

(b) Describe the relationship between the maximum temperature and the number of hot chocolate drinks sold.

.....

.....

(1)

(c) Draw a line of best fit on the scatter diagram.

(1)

One day the maximum temperature was 8 °C.

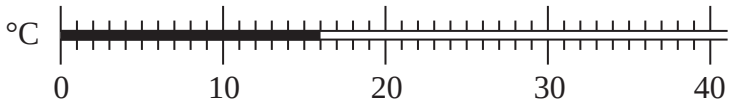
(d) Use your line of best fit to estimate how many hot chocolate drinks were sold.

.....

(1)

(Total for Question 14 is 4 marks)

4 The thermometer shows a temperature.



Butter starts to melt at a temperature of 35 °C.

How many degrees does the temperature shown have to rise so that butter starts to melt?

..... °C

(Total for Question 4 is 2 marks)

Question 191

5 Sally uses her van to deliver boxes to shops.
She can put a maximum weight of 450 kg in the van.

Sally has to deliver 50 boxes to a shop.
Each box has a weight of 30 kg.

Work out the least number of times Sally has to drive to the shop to deliver all 50 boxes.
You must show all your working.

.....

(Total for Question 5 is 3 marks)

6 Here is part of a train timetable from Manchester to London.

Manchester	06 27	07 15	07 35	08 15
Stockport	06 35	07 23	07 43	08 23
Stoke-on-Trent	07 06	07 50	08 12	08 50
London	09 34	09 23	09 52	10 23

A train leaves Stockport at 07 23

(a) At what time should this train get to London?

.....

(1)

Martin gets to the station at Stoke-on-Trent at 08 15

(b) How many minutes should he have to wait for the next train to London?

..... minutes

(1)

On Thursday the 07 43 train leaves Stockport and makes an extra call at Macclesfield 13 minutes later.
This extra stop at Macclesfield will make the train get to Stoke-on-Trent and London 5 minutes later than shown on the timetable above.

(c) Complete the timetable for this train.

Manchester	07 35
Stockport	07 43
Macclesfield	.....
Stoke-on-Trent	.....
London	.....

(3)

(Total for Question 6 is 5 marks)

7 (a) Write the number 20 400 in words.

.....

(1)

(b) Work out 3×-7

.....

(1)

(c) Work out $3 \times (2 + 7)$

.....

(1)

(d) Find the value of 2^4

.....

(1)

Here is a list of numbers.

4 5 8 9 12

(e) From the list, write down the prime number.

.....

(1)

(f) Write the ratio 2 : 6 in its simplest form.

.....

(1)

(Total for Question 7 is 6 marks)

8 A school shop sells fruit bars for 50p each.

On Monday the shop sold 20 fruit bars.
On Tuesday the shop sold fruit bars with a total value of £13.50

The shop sold more fruit bars on Tuesday than on Monday.

(a) How many more?

.....

(3)

The table shows all the things sold in the shop.

Snacks		Drinks	
Fruit bar	50p	Lemon drink	50p
Cereal bar	65p	Water	75p
Chocolate bar	£1.20	Fruit carton	95p

Katie has two £1 coins and three 20p coins.
She has no other money.
She buys 3 cereal bars and a lemon drink.

*(b) Does Katie have enough money left to buy a fruit bar?

You must show all your working.

(4)

(Total for Question 8 is 7 marks)

13 There are 120 bricks in a box.
The bricks are red or blue or green.

$\frac{1}{3}$ of the bricks are red.

$\frac{1}{4}$ of the bricks are blue.

Work out the number of green bricks in the box.

.....

(Total for Question 13 is 4 marks)

1 Ann and Ben each have 20 cards.

Ann gives 5 of her cards to Ben.
Ben gives 8 of his cards to Ann.

How many cards does each person have now?

Ann .....

Ben .....

(Total for Question 1 is 3 marks)

4 Sarah and Greta were in a diving competition.

Here are the scores for each girl's three dives.

Sarah	8.8	9.0	9.3
Greta	9.0	9.0	9.0

Who got the higher total score, Sarah or Greta?
You must show your working.

.....

(Total for Question 4 is 2 marks)

Question 198

7 138 people are going on a school trip.
Each person will travel by coach or by minibus.

Steve gets 3 coaches for the trip.
Each coach has seats for 35 passengers.

Steve also needs some minibuses for the trip.
Each minibus has seats for 10 passengers.

Work out the smallest number of minibuses Steve needs.

.....

(Total for Question 7 is 3 marks)

9 Kimona is going to cook some meat.

She uses this rule to work out the cooking time in minutes.

> cooking time in minutes = weight of meat in kg × 40 and then add 15

Kimona wants to finish cooking the meat at 1 pm.

The weight of the meat is 1.5 kg.

Work out the latest time Kimona can start to cook the meat.

.....

(Total for Question 9 is 3 marks)

11 (a) Work out $+8 - 6$

.....
(1)

(b) Work out $-5 - 4$

.....
(1)

(c) Work out $-12 \div +4$

.....
(1)

(Total for Question 11 is 3 marks)

Question 201

17 Fadiq is going to make some dresses.
She needs 675 centimetres of thread for each dress.

Fadiq wants to make 8 dresses.
She has 50 metres of thread.

Does Fadiq have enough thread for the 8 dresses?
You must show how you got your answer.

(Total for Question 17 is 3 marks)

3 The table shows information about 5 holiday parks.

Holiday park	Location	Indoor pool	Type of accommodation	Cost of holiday
Sea View	Cornwall	No	Caravans	£595
Rosewood	Cornwall	Yes	Caravans	£685
Castle Park	Dorset	Yes	Lodges	£545
Reed Farm	Norfolk	Yes	Lodges	£650
The Pines	Suffolk	No	Caravans	£495

A holiday costs £650 at one of the holiday parks.

(a) Which holiday park?

.....

(1)

(b) Which of the holiday parks has an indoor pool and caravans?

.....

(1)

Sally wants to stay in a lodge at a holiday park with an indoor pool.

(c) Write down the least cost for this holiday.

£.....

(1)

(Total for Question 3 is 3 marks)

4 The price list shows the normal price of some items in a catalogue.

Normal Price	
Bubble bath	£3.00
Shower gel	£2.95
Soap	£2.50
Hand cream	£3.50

There is a special offer.
Joanna can buy any 3 **different** items from the list for a total price of £5

Work out the most money she can save.

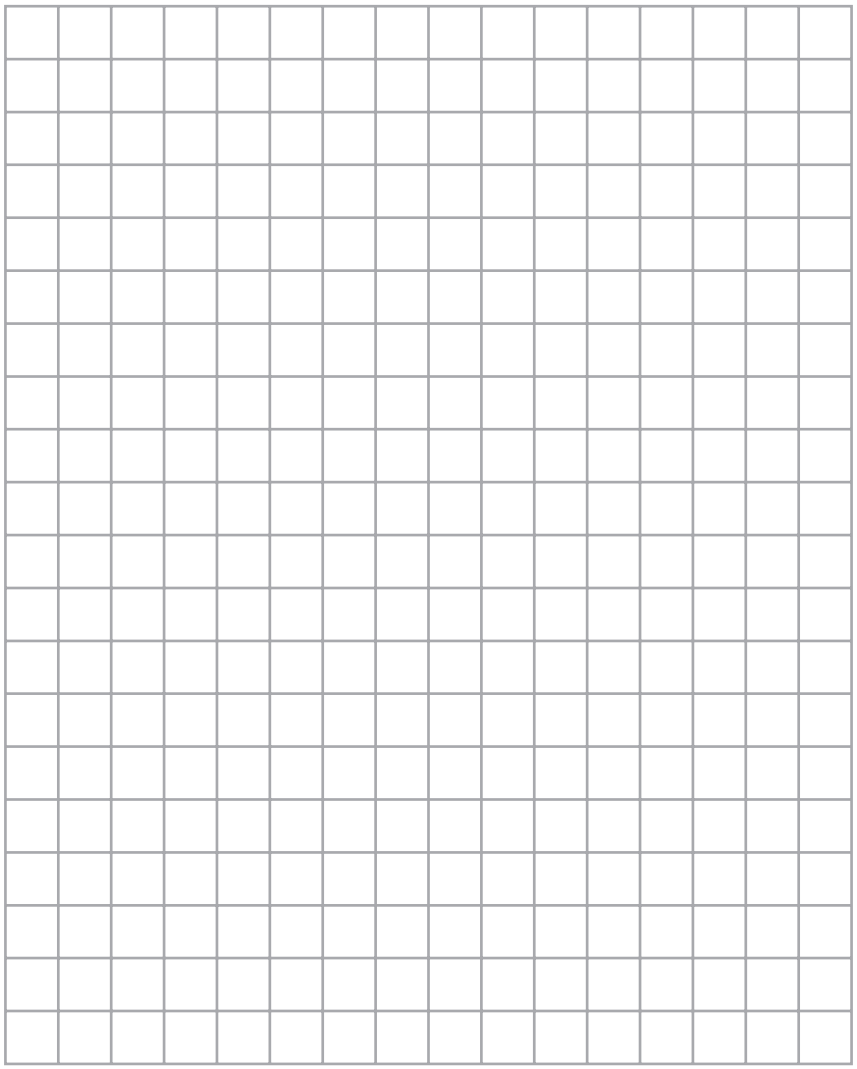
£.....

(Total for Question 4 is 3 marks)

*5 The table shows the minimum temperature and the maximum temperature in a town on each of five days.

	Friday	Saturday	Sunday	Monday	Tuesday
Daily maximum temperature (°C)	18	17	14	14	9
Daily minimum temperature (°C)	12	11	11	8	5

Draw a suitable diagram or chart for this information.



(Total for Question 5 is 4 marks)

6 Here is part of a train timetable from Cromer to Norwich and from Norwich to Cromer.

Cromer to Norwich						
Cromer	10 57	11 57	12 57	13 57	14 57	15 57
North Walsham	11 14	12 14	13 14	14 14	15 14	16 16
Hoveton	11 24	12 25	13 24	14 18	15 24	16 27
Norwich	11 41	12 41	13 41	14 41	15 41	16 44

Norwich to Cromer						
Norwich	14 45	15 45	16 45	17 45	18 51	19 55
Hoveton	14 59	16 00	17 00	18 00	19 05	20 10
North Walsham	15 13	16 15	17 15	18 17	19 20	20 25
Cromer	15 30	16 33	17 33	18 36	19 39	20 43

A train leaves Cromer at 13 57

(a) At what time should this train get to Hoveton?

.....

(1)

Mike lives in Cromer.
He wants to go to watch a football match in Norwich.
Mike is going to go to Norwich by train.

The football match starts at 3 pm.
He wants to get to the football ground at least 30 minutes before the match starts.
It will take Mike 20 minutes to walk from the station to the football ground.

The match will end at 4.55 pm.
It will then take Mike 30 minutes to get to the station.
He wants to get back to Cromer as early as possible.

(b) Plan Mike's journey to the football match and back to Cromer.
You must include the times of the trains.

(4)

(Total for Question 6 is 5 marks)

8 Jo and Liz work in the same shop.

One day, Liz starts work at 9.30 am and stops working 5 hours later.
Jo works from 11.30 am until 4.30 pm.

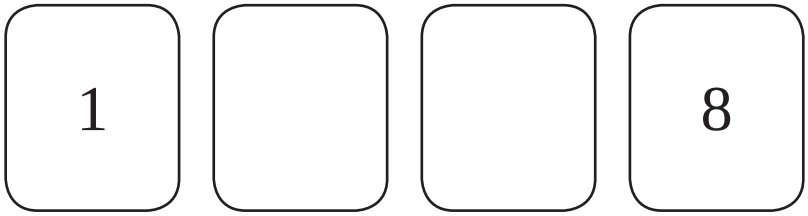
Work out the number of hours that Jo and Liz are working at the same time.

..... hours

(Total for Question 8 is 2 marks)

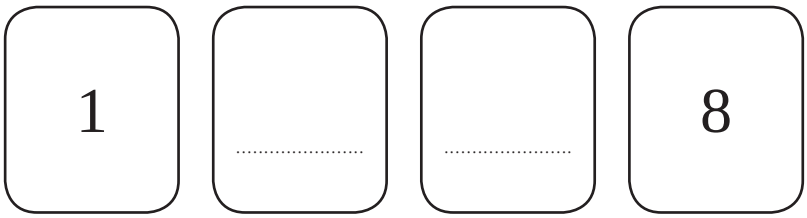
9 Dara has four number cards.
Each card has a positive whole number on it.
Dara puts the cards on a table so that the numbers are in order, starting with the smallest number.

Two of the cards are turned over and you cannot see the numbers on them.

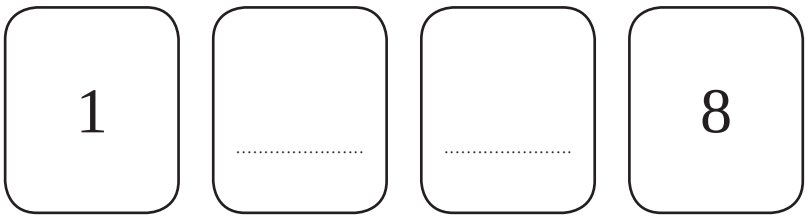


The median of the four numbers is 5

(i) Complete the cards below to show two numbers that could be on the cards that are turned over.



(ii) Complete the cards below to show two other numbers that could be on the cards that are turned over.



(Total for Question 9 is 2 marks)

1 (a) Write these numbers in order of size.
Start with the smallest number.

3007 4435 399 4011 3333

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

3.7 5.62 0.7 14.3

.....

(1)

(c) Write $\frac{9}{10}$ as a decimal.

.....

(1)

(d) Write $\frac{11}{8}$ as a mixed number.

.....

(1)

(Total for Question 1 is 4 marks)

4 A shop sells computers.

The table shows the number of laptops and the number of tablets sold in June, in July and in August.

	June	July	August
Laptops	38	55	41
Tablets	54	43	65

The shop sold more tablets than laptops.

How many more tablets?

.....

(Total for Question 4 is 3 marks)

7 The diagram shows five towns.
It also shows the time it takes to drive between the towns.

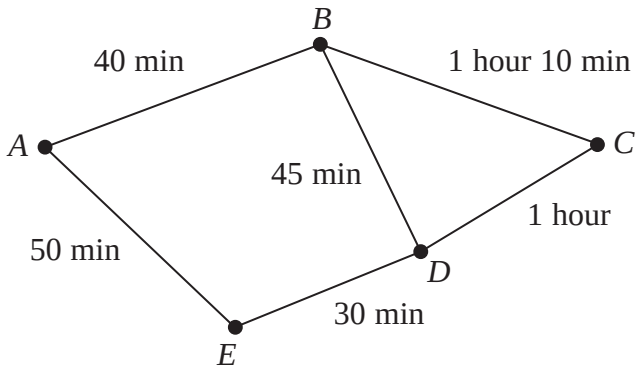


Diagram **NOT** accurately drawn

Sue drives a delivery van.

She will start at *A*, and drive from *A* to *B*
then from *B* to *C*
then from *C* to *D*
then from *D* to *E*
and from *E* back to *A*.

She will stop for 5 minutes in each town to make the delivery.
There is no delivery at *A*.
She wants to be back at *A* by 4pm.

What is the latest time Sue can start from *A* to make the deliveries then drive back to *A* by 4pm?

.....

(Total for Question 7 is 4 marks)

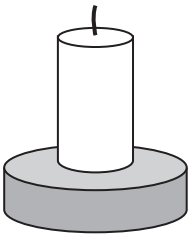
Question 211

14 Work out $\frac{1}{3} + \frac{5}{9}$

.....

(Total for Question 14 is 2 marks)

16 Caroline is making some table decorations.
Each decoration is made from a candle and a holder.



candle and holder

Caroline buys some candles and some holders each in packs.

There are 30 candles in a pack of candles.
There are 18 holders in a pack of holders.

Caroline buys exactly the same number of candles and holders.

(i) How many packs of candles and how many packs of holders does Caroline buy?

..... packs of candles

..... packs of holders

Caroline uses all her candles and all her holders.

(ii) How many table decorations does Caroline make?

..... table decorations

(Total for Question 16 is 5 marks)

3 Emma keeps money in a tin.

The table shows how much money Emma put in the tin and how much money she took out of the tin in each of four weeks.

Week	Money in	Money out
1	£3.50	£2.00
2	£4.00	£6.00
3	£5.00	£0.00
4	£6.50	£3.50

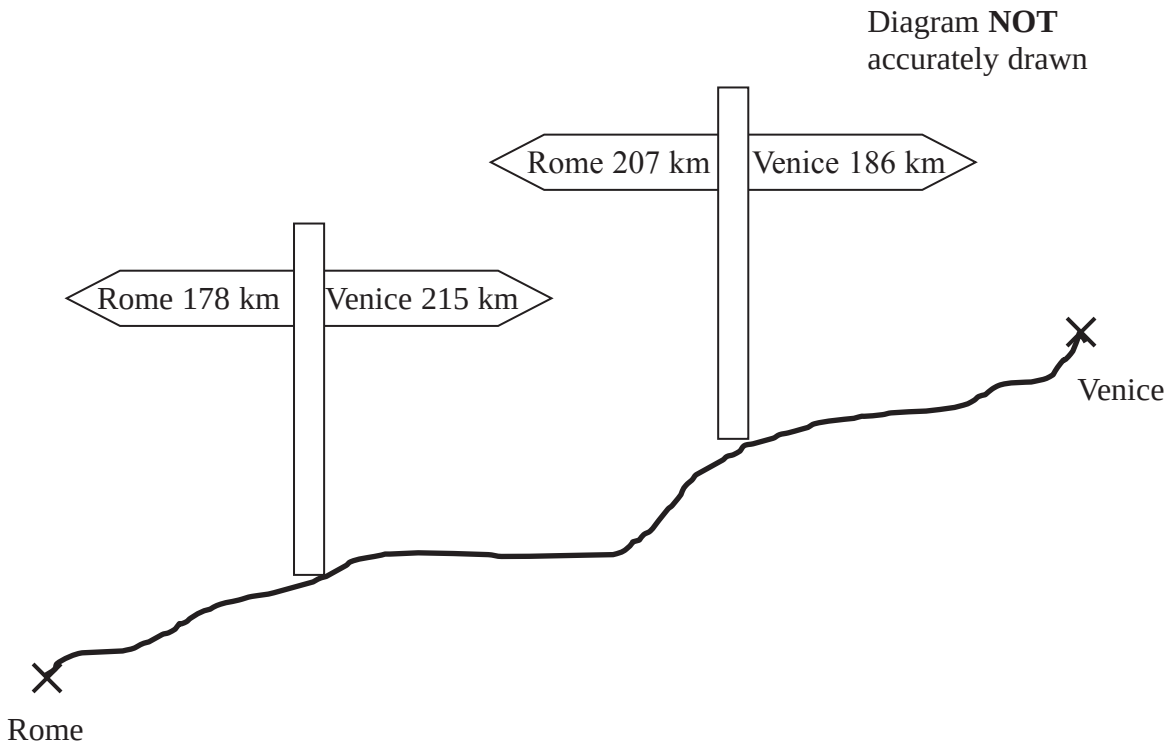
Emma had £15 in the tin at the start of week 1

How much money did Emma have in the tin at the end of week 4?

£.....

(Total for Question 3 is 3 marks)

5



The diagram shows two signs at the side of a road.
The road goes between Rome and Venice.

(a) Work out the distance along the road between Rome and Venice.

.....km
(2)

(b) Work out the distance along the road between the two signs.

.....km
(2)

(Total for Question 5 is 4 marks)

***9** Fritz buys 12 pencils.
Each pencil costs 37 pence.

Fritz pays with a £5 note.

Work out the amount of change he should get.

(Total for Question 9 is 3 marks)

12 A supermarket sells milk in three sizes of carton.



0.5 litres	1 litre	2 litres
35p	65p	£1.25

Jerry has £11.50 to spend on milk.

He wants to buy as much milk as possible.

Work out the greatest amount of milk Jerry can buy.

.....litres

(Total for Question 12 is 3 marks)

13 In a game of rugby, the teams score

5 points for a try,
2 points for a conversion,
3 points for a penalty.

The table shows the numbers of tries, conversions and penalties scored by Felton and by Bloomsbury in a game of rugby.

Team	Number of tries	Number of conversions	Number of penalties
Felton	4	2	1
Bloomsbury	2	2	5

Which team scored the greatest total number of points?
You must show your working.

.....

(Total for Question 13 is 3 marks)

14 This rule can be used to work out the time, in minutes, it takes to make microchips.

Time = number of microchips ÷ 20 + 4

(a) Work out the time it takes to make 100 microchips.

.....minutes
(2)

(b) Work out the greatest number of microchips that can be made in 60 minutes.

.....
(3)

(Total for Question 14 is 5 marks)

1 The table shows the heights of six mountains.

Mountain	Height (metres)
Diran	7266
Lhotse	8516
K12	7428
Cho Oyu	8188
Jannu	7711
Makalu	8485

(a) Write down the name of the highest of these mountains.

.....

(1)

(b) Write the number **8188** to the nearest hundred.

.....

(1)

(c) Write the number **7428** in words.

.....

(1)

The mountain K3 is eight thousand and fifty one metres high.

(d) Write the number **eight thousand and fifty one** in figures.

.....

(1)

(Total for Question 1 is 4 marks)

3 (a) Work out 56×1000

.....
(1)

(b) Work out $600 - 324$

.....
(1)

(c) Work out $\frac{1}{4}$ of 24 kg

..... kg
(1)

(d) Work out $4 \times 5 + 9$

.....
(1)

(e) Work out $18 - 10 \div 2$

.....
(1)

(Total for Question 3 is 5 marks)

4 Sarah has saved 254 pound coins.
She puts the pound coins into bags.
There are 20 pound coins in each full bag of coins.

Sarah is going to take all her full bags of coins to the bank.
She can only take up to 5 full bags of coins to the bank each day.

Sarah wants to go to the bank on as few days as possible.

On how many days will Sarah need to go to the bank?

.....

(Total for Question 4 is 3 marks)

11 Susan and Joe are going on holiday.
They can take two cases onto the plane free of charge if the total weight of the two cases is no more than 40 kg.

Susan's case has a weight of 22.8 kg.
Joe's case has a weight of 19.5 kg.

*(a) Can they take their two cases onto the plane free of charge?

(2)

Susan and Joe want to be at the airport terminal at 14 30

It will take 1 hour and 20 minutes to drive from home to the airport.
It will then take a total of 30 minutes to park the car and go into the airport terminal.

(b) What is the latest time they can leave home?

.....

(3)

(Total for Question 11 is 5 marks)

12 Harry is going to plant some bean plants in his garden.
The garden is in the shape of a rectangle 3 metres by 2 metres.

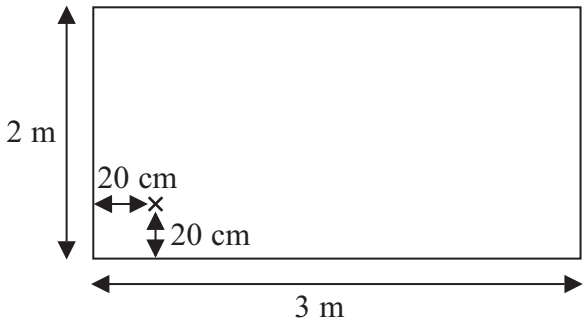


Diagram **NOT** accurately drawn

Harry will plant the first bean plant 20 cm from the edges of the garden, as shown in the diagram.

Harry will plant the bean plants in rows.
In each row, the space between plants will be 20 cm.
The space between rows will be 20 cm.

Work out the greatest number of bean plants Harry can plant in his garden.

.....

(Total for Question 12 is 4 marks)

19 Miss Martins is organising a school play.

The total cost of putting on the play is £960

The school pays £300 of this cost.
Miss Martins sells tickets to pay the rest of the cost.

Miss Martins sells 500 tickets.
Each ticket costs £4

Miss Martins has enough money to pay the rest of the costs and to give all the money left over to charity.

Work out how much money Miss Martins gives to charity.

£.....

(Total for Question 19 is 4 marks)

6

Stan's Driving School	
First two lessons	£12.75 each lesson
All other lessons	£20.00 each lesson

Alex has 5 lessons with Stan's Driving School.

(a) Work out the total cost.

£.....

(2)

Leah has some lessons with Stan's Driving School.
The total cost of the lessons is £305.50

(b) Work out how many lessons Leah has.

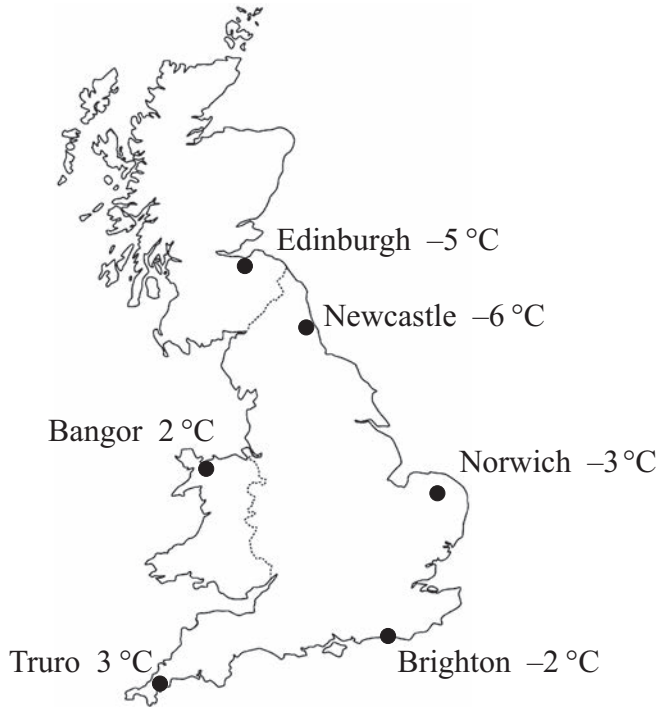
.....

(3)

(Total for Question 6 is 5 marks)

7 Here is a map of Great Britain.

The map shows the temperatures in some cities at midnight on 20th January.



(a) Which city had the lowest temperature at midnight?

.....

(1)

In Brighton, the temperature rose by 5 °C between midnight on 20th January and midday on 21st January.

(b) What was the temperature in Brighton at midday on 21st January?

..... °C

(1)

At midnight on 20th January, the temperature in Nottingham was halfway between the temperature in Truro and the temperature in Edinburgh.

(c) What was the temperature in Nottingham?

..... °C

(2)

(Total for Question 7 is 4 marks)

9 Amy is making a shelf unit for her DVDs.

She needs

3 pieces of wood of length 32 cm
and 2 pieces of wood of length 45 cm.

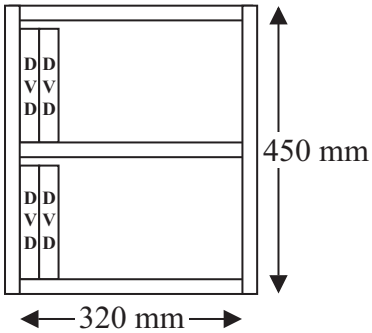
Amy has a piece of wood of length 2 metres.
She cuts the 5 pieces of wood she needs from the 2 metre length of wood.

(a) What length of wood does Amy have left from the 2 metre length?

.....

(3)

The diagram shows the shelf unit.



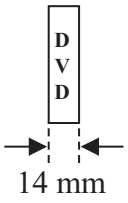


Diagram **NOT** accurately drawn

Amy will put DVDs on the 2 shelves, as shown in the diagram.
Each DVD has a width of 14 mm.

(b) What is the greatest number of DVDs Amy can put on the 2 shelves?

.....

(3)

(Total for Question 9 is 6 marks)

16 Work out the value of $\sqrt{14.44} \times (7.3 - 2.45)^2$

Write down all the figures on your calculator display.

.....

(Total for Question 16 is 2 marks)

3 Here is a thermometer.



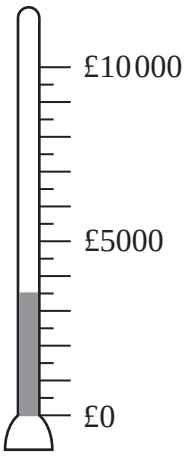
(a) Write down the temperature shown on the thermometer.

..... °C

(1)

A Youth Club is collecting money for charity.

The scale below shows how much money the Youth Club has collected.



(b) How much more money does the Youth Club need to collect to get a total of £10000?

£ .....

(2)

(Total for Question 3 is 3 marks)

7 Here is a bus timetable from a Park and Ride car park to a town centre.

Car park	Town centre
0740	0752
0800	0812
0815	0827
then every 15 minutes until	
1815	1827

Sadia gets to the car park at 0745
She catches the next bus to the town centre.

(a) What time should the bus get to the town centre?

.....

(1)

Here is the bus timetable from the town centre to the car park.

Town centre	Car park
0803	0815
0835	0847
0902	0914
0920	0932
then every 15 minutes until	
1920	1932

(b) How many buses go from the town centre to the car park between 0800 and 1000?

.....

(2)

Paul wants to leave the town centre after 1730
He is going to catch a bus to the car park.

(c) What is the time of the first bus Paul can catch from the town centre after 1730?

.....

(1)

(Total for Question 7 is 4 marks)

9 Here is information about the cost of sending a parcel to Europe by Parcel Link.

Next day delivery	£19.00 plus 70p for each kg more than 5 kg
3 day delivery	£16.00 plus 50p for each kg more than 5 kg

Kate is going to send a parcel to Europe by Parcel Link.
The parcel weighs 12 kg.

Kate can send the parcel using next day delivery or using 3 day delivery.

(a) Work out the difference in the two costs.

£.....
(3)

Adam sends a parcel to Europe by Parcel Link.
He uses 3 day delivery.

The cost is £25

(b) Work out how many kilograms Adam's parcel weighs.

..... kg
(3)

(Total for Question 9 is 6 marks)

12 This rule is used to work out a football team's goal difference.

Goal difference = goals for – goals against

The table gives information about five football teams.

Football team	Goals for	Goals against	Goal difference
Arsenal	30	11	19
Chelsea	30	17	.....
Tottenham	15	16	.....
West Ham	.....	19	–6
Fulham	14	.....	–12

Complete the table.

(Total for Question 12 is 4 marks)

17 $a = 4$
$b = -5$

(a) Work out the value of $2a + 3b$

.....

(2)

$x = 3$

(b) Work out the value of $4x^2$

.....

(1)

(Total for Question 17 is 3 marks)

20 Rachel bought a packet of 60 balloons.

$\frac{1}{10}$ of the balloons were yellow.

$\frac{3}{5}$ of the balloons were red.

The rest of the balloons were blue.

How many of the balloons were blue?

..... balloons

(Total for Question 20 is 3 marks)

26 John buys some boxes of pencils and some packets of pens for people to use at a conference.

There are 40 pencils in a box.
There are 15 pens in a packet.

John gives one pencil and one pen to each person at the conference.
He has no pencils left.
He has no pens left.

How many boxes of pencils and how many packets of pens did John buy?

..... boxes of pencils

..... packets of pens

(Total for Question 26 is 3 marks)

Question 236

1 Use your calculator to work out

(a) 3.8×4.5

.....

(1)

(b) $\sqrt{1.69}$

.....

(1)

(c) 3.2^2

.....

(1)

(Total for Question 1 is 3 marks)

3 A Youth Club is having a quiz night.

There will be 17 teams at the quiz night.
There will be 4 people in each team.
There will also be 3 people to organise the quiz.

Each person at the quiz will need a chair.

Work out the number of chairs needed.

.....

(Total for Question 3 is 2 marks)

6 A school bus takes students between 3 different schools.

The bus leaves school A.
There are 16 students on the bus.

The bus then goes to school B.
At school B, 13 students get off the bus and 4 students get on the bus.

The bus then goes to school C.
At school C, 5 students get off the bus and 7 students get on the bus.

How many students are now on the bus?

.....

(Total for Question 6 is 3 marks)

8 Samantha has to go to a meeting.

The meeting should start at 2 pm.
Samantha gets to the meeting at 1 45 pm.

(a) How long does Samantha have to wait until 2 pm?

.....

(2)

The 2 pm meeting starts 10 minutes late.
The meeting lasts 55 minutes.

(b) Work out the time the meeting finishes.

.....

(2)

Samantha then has to go to a 4 pm meeting.
It will take Samantha 75 minutes to get to this meeting.

*(c) Can Samantha get to this meeting by 4 pm?
You must show how you get your answer.

(2)

(Total for Question 8 is 6 marks)

***12** Here is part of Dani's electricity bill.

Electricity Bill	
New reading	2968 units
Old reading	2675 units
Price per unit	18p

Work out how much Dani has to pay for the units of electricity she has used.

(Total for Question 12 is 4 marks)

***15** Andy cycles to keep fit.
He wants to cycle a total of 70 km each week.

Andy went on four cycle rides last week.

Here are the distances he cycled.

18.2 km 14 km 250 m $20\frac{1}{2}$ km 12 050 m

Did Andy cycle a total of 70 km last week?
You must show how you got your answer.

(Total for Question 15 is 4 marks)

Question 242

21 4.5 kg of oranges and 3 kg of apples cost a total of £3.87
2.5 kg of oranges cost £1.40

Work out the cost of 1 kg of apples.

..... p

(Total for Question 21 is 4 marks)

***23** Redlands School sent x students to a revision day.
St Samuel's School sent twice as many students as Redlands School.
Francis Long School sent 7 fewer students than Redlands School.

Each student paid £15 for the revision day.
The students paid a total of £1155

Work out how many students were sent by each school to the revision day.
You must show all your working.

(Total for Question 23 is 5 marks)

1 The table gives information about some hair dryers.

Make	Colour	Number of heat settings	Number of speeds	Cost (£)
Saplom	Black	1	2	15.00
Saplom	Black	2	2	19.99
Hilperton	Pink	3	2	21.25
Hilperton	Yellow	2	3	26.50
SGW	Black	2	2	31.49
SGW	Blue	3	2	35.20
SGW	Pink	3	3	42.00

(a) Write down the make of the cheapest hair dryer.

.....

(1)

Magda wants to buy a hair dryer.
The hairdryer must have 3 speeds.

She wants to pay less than £35

(b) What colour of hair dryer does she need to buy?

.....

(1)

Zaheer buys a hair dryer.

The hair dryer has 3 heat settings.
It is **not** pink.

(c) Write down the cost of this hair dryer.

£.....

(1)

(Total for Question 1 is 3 marks)

***5** Leandros goes swimming to keep fit.

Here is his swimming plan for the next four weeks

- Each Monday, each Wednesday and each Friday swim 30 lengths of the swimming pool.
- Each Saturday swim 60 lengths of the swimming pool.

The length of the swimming pool is 25 metres.

Leandros will start his swimming plan on Monday.
He wants to swim at least 14 km in four weeks.

Leandros follows his swimming plan.

Does he swim at least 14 km in the four weeks?
You must show all of your working.

(Total for Question 5 is 4 marks)

Question 246

June 2015 | 5MB2F/01 | Original Q1 | Legacy

1 (a) Work out 17.2 + 25.8

.....

(1)

(b) Work out $\frac{1}{4} \times 60$

.....

(1)

(c) Write down the value of the 3 in 18.35

.....

(1)

(Total for Question 1 is 3 marks)

4 Jodie has 40 eggs.

She wants to put all the eggs into boxes.
She can put 6 eggs into each box.

Find the smallest number of boxes Jodie needs.
You must show your working.

.....

(Total for Question 4 is 2 marks)

***6** Kerry uses sticky tape to fasten parcels.

She uses 15 cm of sticky tape to fasten each parcel.

Kerry needs to fasten 25 parcels.
She has 300 cm of sticky tape.

Does Kerry have enough sticky tape to fasten all the parcels?
You must show your working.

(Total for Question 6 is 3 marks)

9 Penelope is going to cook a chicken.

She uses this rule to find the cooking time.

cooking time = 20 minutes for each 0.5 kg + 10 minutes

The chicken has a weight of 2 kg.

Penelope wants to finish cooking the chicken at 12 30 pm.

What time should Penelope start cooking the chicken?

.....

(Total for Question 9 is 4 marks)

18 The diagram shows a rectangular floor.

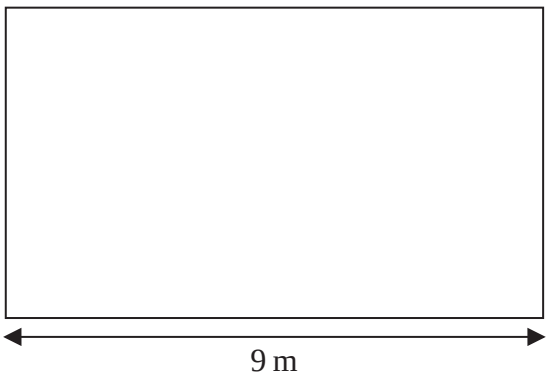


Diagram **NOT** accurately drawn

Toji is going to cover the floor with floor boards.
Each floor board is 0.1 m wide and 1.5 m long.

Work out the smallest number of floor boards Toji needs.

.....

(Total for Question 18 is 3 marks)

Question 251

1 Use your calculator to find the value of

(a) 2.6×1.7

.....

(1)

(b) $\frac{21}{0.3}$

.....

(1)

(c) $\sqrt{6.25}$

.....

(1)

(d) 1.5^3

.....

(1)

(Total for Question 1 is 4 marks)

4 Here are the prices of drinks and snacks in a cafe.

Drinks		Snacks	
tea	50p	cheese roll	£1.20
coffee	60p	samosa	£1.10
lemonade	40p	hot dog	£1.40
		baked potato	£1.60

Barry buys a tea, a hot dog and a cheese roll.

(a) Work out the total cost.

£.....

(2)

Naomi buys a drink and a snack.

She pays with 3 pound coins.
She gets 80p change.

(b) Which drink and which snack did Naomi buy?

..... and .....

(2)

(Total for Question 4 is 4 marks)

Question 253

7 Billy sells apples in bags.
There are 8 apples in each bag he sells.

On Monday morning Billy has 116 apples.
On Monday afternoon he sells 12 bags of apples.

On Tuesday morning Billy gets 86 more apples.
On Tuesday afternoon he sells 9 bags of apples.

Work out how many apples Billy now has.

.....

(Total for Question 7 is 4 marks)

8 15 cars were driven onto a ferry.

4 cars had a driver but **no** passengers.
6 cars had a driver and 1 passenger.
5 cars had a driver and 2 passengers.

Work out the total number of people in the 15 cars.

.....

(Total for Question 8 is 3 marks)

***9** Lara is a music teacher.
She can use a room on Wednesday afternoon for 3 hours.

The table shows the lessons that students want on Wednesday afternoon.

Student	**Lesson**	**Length of lesson**
Kate	Keyboard	20 minutes
Sue	Singing	$\frac{1}{2}$ hour
Tom	Keyboard	20 minutes
Gaby	Singing	45 minutes
Richard	Keyboard	20 minutes
Sam	Keyboard	45 minutes
Nina	Singing	$\frac{1}{2}$ hour

When one lesson ends the next lesson starts.

Can Lara teach all these lessons in 3 hours?

(Total for Question 9 is 4 marks)

***14** Faiza wants to buy some plants.
She finds out the price of the plants from 2 shops.

Greenway
Tray of 6 plants
£2.95
Buy one tray, get one tray free.

Petals
Tray of 15 plants
£3.90

Faiza wants to buy exactly 60 plants.
She wants to buy the plants as cheaply as possible.

Which shop should Faiza buy the plants from?
You must show your working.

(Total for Question 14 is 4 marks)

15 Tom wants to buy a saxophone.
The saxophone costs £820

Tom pays £250 of the cost as a deposit.
He then pays the rest of the cost in 6 equal monthly payments.

Work out the amount of each monthly payment.

£.....

(Total for Question 15 is 3 marks)

2 There are 25 passengers on a bus.
The bus stops at a station.

13 passengers get off the bus.
20 passengers get on the bus.

The bus is full when there are 58 passengers on it.

(a) How many more passengers can get on the bus so that the bus is full?

.....

(3)

The table shows the number of students on a school bus each day for two weeks.

	Mon	**Tue**	**Wed**	**Thu**	**Fri**
Week 1	12	12	17	10	13
Week 2	16	20	13	12	9

There were more students on the school bus in Week 2 than in Week 1.

(b) How many more students?

.....

(3)

(Total for Question 2 is 6 marks)

3 (a) Write the number **7378** to the nearest hundred.

.....

(1)

(b) Write the number **6402** in words.

.....

(1)

(c) Work out 54×1000

.....

(1)

(d) Work out $\frac{1}{4}$ of 28 kg.

..... kg

(1)

(e) Work out $9 + 12 \div 3$

.....

(1)

(Total for Question 3 is 5 marks)

2 A film starts at 1830
The film ends at 2050

(a) How long does the film last?

.....

(2)

Jan watches this film and then catches a bus home.

The bus leaves the bus stop 18 minutes after the film ends.
The bus takes 24 minutes to get to Jan's home.

*(b) Will Jan be home before 2130?
You must show all your working.

(3)

(Total for Question 2 is 5 marks)

3 Here is a shopping bill.

Item	Cost
apples	£1.69
orange juice	98p
3 tins of peas at 37p each	.....
1 packet of cheese	£4.52
salmon	.....
Total cost	£10.98

(a) Complete the shopping bill by writing in the missing costs.

(3)

Pat wants to buy a book.
The book costs £5.50

Pat has a voucher for £1.70
She also has 3 pound coins and 3 twenty pence coins.
She wants to buy the book with the voucher and the coins.

(b) Is this enough for Pat to buy the book?
You must show all your working.

(3)

(Total for Question 3 is 6 marks)

10 At 1am on Monday, the temperature in Oslo was –5 °C.
At 1pm on Monday, the temperature in Oslo was 12 °C higher than the temperature at 1am.
At 1am on Tuesday, the temperature in Oslo was 18 °C lower than the temperature at 1pm on Monday.

(a) Work out the temperature in Oslo at 1am on Tuesday.

.....°C
(2)

In Malaga, the temperature is 18 °C.
In Granada, the temperature is –6 °C.

(b) Work out the difference in temperature between Malaga and Granada.

.....°C
(2)

(Total for Question 10 is 4 marks)

Question 263

11 10 adults stand in a queue.

6 of the adults have **no** children with them.
The rest of the adults each have one child with them.

Work out the total number of adults and children in the queue.

.....

(Total for Question 11 is 2 marks)

19 Use your calculator to work out

(a) $\sqrt[3]{42.875}$

.....

(1)

(b) $\dfrac{3.4 \times 5.2}{2.6 - 0.39}$

.....

(2)

(Total for Question 19 is 3 marks)

23 Ali is y years old.
Bhavara is twice as old as Ali.
Ceris is 3 years younger than Ali.

The total of their ages is 125 years.

Work out the age of each person.

Ali.....years

Bhavara.....years

Ceris.....years

(Total for Question 23 is 4 marks)

***4** Jane can claim expenses when she drives as part of her job.
She can claim 35p for every mile she drives.

For one journey she writes down

Mileage at end of journey	8565
Mileage at start of journey	8437

Work out how much money Jane can claim for this journey.

(Total for Question 4 is 4 marks)

11 The table shows the costs of some tins of pet food.

dog food	96p per tin
cat food	56p per tin

Special offer

$\frac{1}{4}$ off the total cost

Panashe buys

4 tins of dog food
and 3 tins of cat food

He gets $\frac{1}{4}$ off the total cost.

He pays with a £20 note.

(a) How much change should he get?

£.....

(4)

Packets of fish food cost £1.84 each.

Pulkova has £14 to spend on fish food.

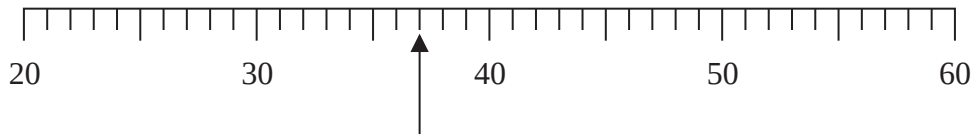
(b) Work out the greatest number of packets of fish food she can buy.

.....

(2)

(Total for Question 11 is 6 marks)

1 (a) Write down the number marked with the arrow.



.....

(1)

(b) Write the number **twenty three thousand and seventy nine** in figures.

.....

(1)

(c) Write down the value of the **8** in 3876

.....

(1)

(Total for Question 1 is 3 marks)

2 Ruth is 1.23 m tall.

Lee is 6 cm shorter than Ruth.

How tall is Lee?

.....

(Total for Question 2 is 2 marks)

Question 270

4 There are 120 people at a party.

$\frac{1}{3}$ of the people leave the party.

Work out the number of people still at the party.

.....

(Total for Question 4 is 3 marks)

6 Jack and Lewis are in a singing competition.
5 judges each give Jack and Lewis points.

These points are shown below.

Jack	4	6	2	4	6

Lewis	2	6	7	0	4

Jack gets more points than Lewis.

Work out how many more points.

.....

(Total for Question 6 is 2 marks)

Question 272

***8** Ahmed is going to catch the bus that leaves at 8.16 am.
This bus takes 25 minutes to get to the bus stop in town.
It will then take Ahmed 12 minutes to walk from the bus stop in town to the train station.

Work out if Ahmed will be able to catch the 8.50 am train.
Show how you get your answer.

(Total for Question 8 is 3 marks)

9 (a) Write these numbers in order of size.
Start with the smallest number.

0.401 0.46 0.37 0.439

.....

(1)

(b) Write these numbers in order of size.
Start with the smallest number.

75% $\frac{7}{8}$ 0.25 $\frac{1}{2}$ $\frac{2}{3}$

.....

(2)

(Total for Question 9 is 3 marks)

10 Ashley takes his 2 children to the cinema.
He has £30 to spend.

Ticket prices	
adult	£8.20
child	£6.10

Drink prices	
large	£3.45
medium	£3.15
small	£2.70

Ashley buys 1 adult ticket and 2 child tickets.
He buys 3 drinks with the money he has left.

The 3 drinks are all the same size.
The size of each drink is as big as possible.

What is the price of each drink?
You must show all your working.

£ .....

(Total for Question 10 is 4 marks)

11 Work out

(i) $3 + 4 \times 2$

.....

(ii) $(13 - 3) \times 5$

.....

(iii) $5^2 + 6$

.....

(Total for Question 11 is 3 marks)

Question 276

12 $a = 2$
$b = 3$

Work out the value of $6a + 5b$

.....

(Total for Question 12 is 2 marks)

18 Andy is going to cover a wall with tiles.

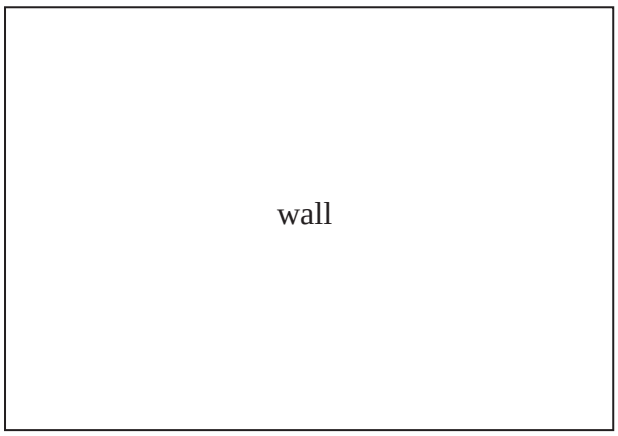
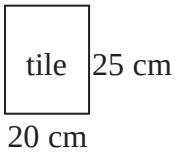


Diagram **NOT** accurately drawn



The wall is in the shape of a rectangle.
The wall is 3 m wide and 2.5 m high.
The tiles are rectangles 20 cm wide and 25 cm high.

The tiles are sold in boxes.
There are 20 tiles in each box.
Each box of tiles costs £8.50

Work out the total cost of the boxes of tiles Andy needs to buy.
You must show all your working.

£ .....

(Total for Question 18 is 5 marks)

20 Tom and Amy set the alarms on their phones to sound at 6.45 am.

Both alarms sound together at 6.45 am.
Tom's alarm then sounds every 9 minutes.
Amy's alarm then sounds every 12 minutes.

At what time will both alarms next sound together?

.....

(Total for Question 20 is 3 marks)

3 The diagram shows the distances by rail, in kilometres, between five towns.

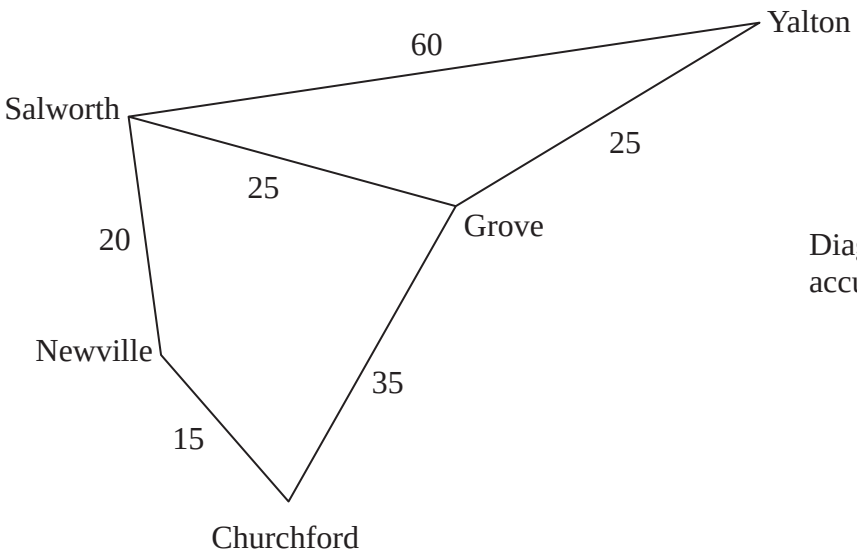


Diagram **NOT** accurately drawn

Work out the shortest distance by rail between Newville and Yalton.

.....kilometres

(Total for Question 3 is 2 marks)

4 (a) Write 3 metres in centimetres.

.....centimetres
(1)

(b) Write 4000 grams in kilograms.

.....kilograms
(1)

(c) Write 700 millilitres in litres.

.....litres
(1)

(Total for Question 4 is 3 marks)

Question 281

5 Harry puts sweets into bags.
He then puts the bags of sweets into boxes.

Harry puts 25 sweets into each bag.
He then puts up to 60 bags of sweets into each box.

Harry has 4200 sweets.

Work out the least number of boxes he needs.

.....

(Total for Question 5 is 3 marks)

7 Jeeha goes to the cinema with some friends.

She has two vouchers for cinema tickets.

Voucher
Cinema tickets
3 for the price of 2

Voucher
Cinema tickets
3 for the price of 2

A cinema ticket costs £8.30
Jeeha needs 7 cinema tickets.

Jeeha buys the cinema tickets.
She uses both vouchers.

Work out the total amount Jeeha pays for the cinema tickets.

£ .....

(Total for Question 7 is 3 marks)

***9** Kerry is going to make some sandwiches.

She has 3 packs of bread.
There are 18 slices of bread in each pack.

Kerry wants to make 25 sandwiches.
She will use 2 slices of bread to make each sandwich.

Does Kerry have enough bread to make 25 sandwiches?
You must show all your working.

(Total for Question 9 is 3 marks)

11 Fiona, Barry and Clive each put some coins into a charity box.

The table gives information about the coins they put into the charity box.

	1p	2p	5p	10p
Fiona	3	4	2	0
Barry	4	3	0	2
Clive	0	1	3	4

Work out the total amount of money they put into the charity box.

£ .....

(Total for Question 11 is 3 marks)

13 Here is the price list in Jose's Tea Shop.



Jose's Tea Shop

Drinks

tea	£1.85
coffee	£2.15
orange juice	95p

Snacks

cake	£2.75
cookie	£1.25
piece of fruit	65p

Jill buys a tea and two cookies.

Work out the total cost.

£ .....

(Total for Question 13 is 2 marks)

14 This rule is used to work out the cost of hiring a lawn mower.

cost = £7.25 × number of hours hired

Kim hires a lawn mower for 4 hours.

(a) Work out the cost.

£ .....
(2)

Tony hires a lawn mower.
The cost is £50.75

(b) How many hours did Tony hire the lawn mower for?

.....hours
(2)

(Total for Question 14 is 4 marks)

***17** Pete works in a garage.
He uses an oil heater to heat the garage.

Pete uses the oil heater for $5\frac{1}{2}$ hours each day.
The oil heater uses 0.75 litres of oil each hour.

Pete is going to work in the garage for 60 days.
He has 250 litres of oil.

Does Pete have enough oil to heat the garage for 60 days?
You must show clearly how you got your answer.

(Total for Question 17 is 4 marks)

4 The table shows the numbers of people, in thousands, visiting five castles in 2009 and in 2010

	Number of people (thousands)	
Castle	**2009**	**2010**
Bodiam	185	177
Chirk	108	120
Dunster	133	128
Penrhyn	231	230
Scotney	124	118

*(a) Did a greater total number of people visit these castles in 2009 or in 2010?
You must show all your working.

(3)

David wants to visit Dunster castle.
He is going to go from Taunton to Dunster by bus.

Here is part of the bus timetable.

Taunton	07 20	08 42	09 33	11 03
Coombe Florey	07 40	08 58	09 58	11 28
Watchet	08 03	09 21	10 21	11 51
Carhampton	08 16	09 34	10 34	12 04
Dunster	08 18	09 36	10 36	12 06

A bus leaves Taunton at 08 42

(b) (i) What time should this bus get to Dunster?

.....

(ii) How many minutes should this bus take to get from Taunton to Dunster?

..... minutes
(2)

Anne lives in Watchet.
She is going to go to Dunster by bus.
She wants to arrive in Dunster by 10 00

(c) Write down the time of the latest bus Anne can get from Watchet.

.....
(1)

(Total for Question 4 is 6 marks)

12 Jodie buys 12 cans of cola.
There are 330 m*l* of cola in each can.

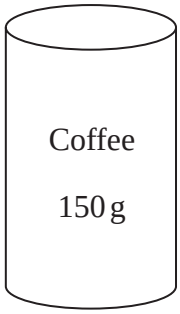
Rob buys 4 bottles of cola.
There is 1 litre of cola in each bottle.

Rob buys more cola than Jodie.
How much more?

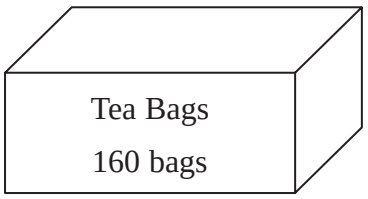
.....

(Total for Question 12 is 3 marks)

13 Adam owns a cafe.



£4



£4.50

There are 150 grams of coffee in each jar of coffee, costing £4
There are 160 tea bags in each box of tea bags, costing £4.50

Adam uses
3 grams of coffee to make each cup of coffee
and 1 tea bag to make each mug of tea.

Adam buys enough jars of coffee to make 300 cups of coffee.
He also buys enough boxes of tea bags to make 500 mugs of tea.

(a) Work out the total cost.

£.....

(5)

Adam also sells cakes in his cafe.



On Friday afternoon, Adam had **no** cakes to sell.

On Saturday morning, 6 trays of cakes were delivered to the cafe.
There were 30 cakes in each tray.

When the cafe closed on Saturday, 12 of these cakes had **not** been sold.

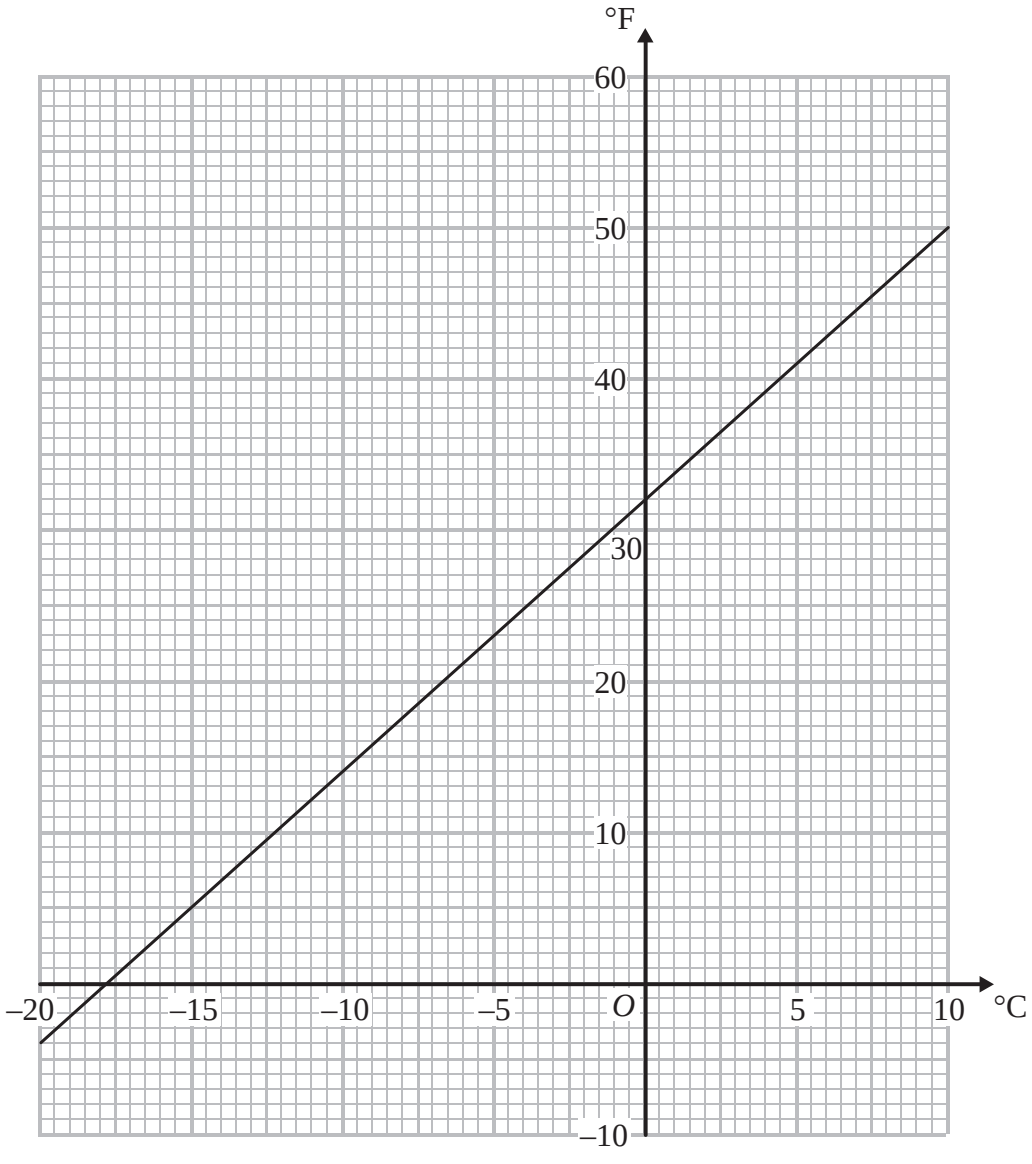
(b) Work out how many cakes were sold on Saturday.

.....

(3)

(Total for Question 13 is 8 marks)

14 You can use this conversion graph to change between temperatures in degrees Celsius (°C) and temperatures in degrees Fahrenheit (°F).



The temperature inside a refrigerator needs to be 40 °F.

(a) Use the conversion graph to change a temperature of 40 °F into a temperature in °C.

..... °C

(1)

The temperature in a freezer needs to be 0 °F.

The temperature in Dave's freezer is –10 °C.

*(b) Compare the temperature in Dave's freezer with 0 °F.
You must show your working.

(3)

(Total for Question 14 is 4 marks)

***24** The diagram shows the plan of a floor.

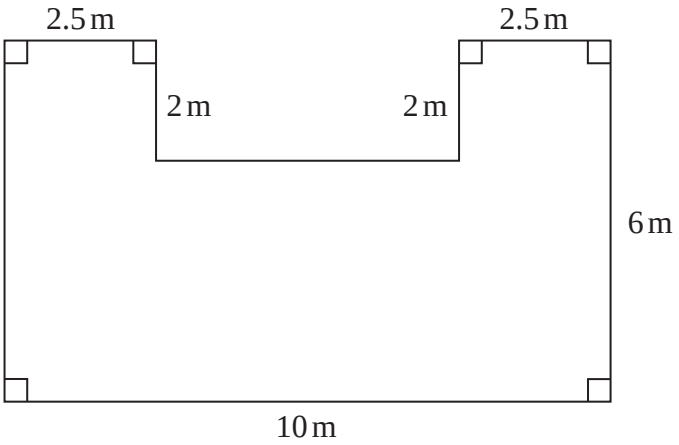


Diagram **NOT** accurately drawn

Angie is going to varnish the floor.

She needs 1 litre of varnish for 5 m^2 of floor.
There are 2.5 litres of varnish in each tin of varnish.

Angie has 3 tins of varnish.

Does she have enough varnish for all the floor?
You must show all your working.

(Total for Question 24 is 5 marks)

1 (a) Write the number 4726 in words.

.....

(1)

(b) Write the number **five million** in figures.

.....

(1)

(c) Write the number 3648 correct to the nearest hundred.

.....

(1)

(d) Write these numbers in order of size.
Start with the smallest number.

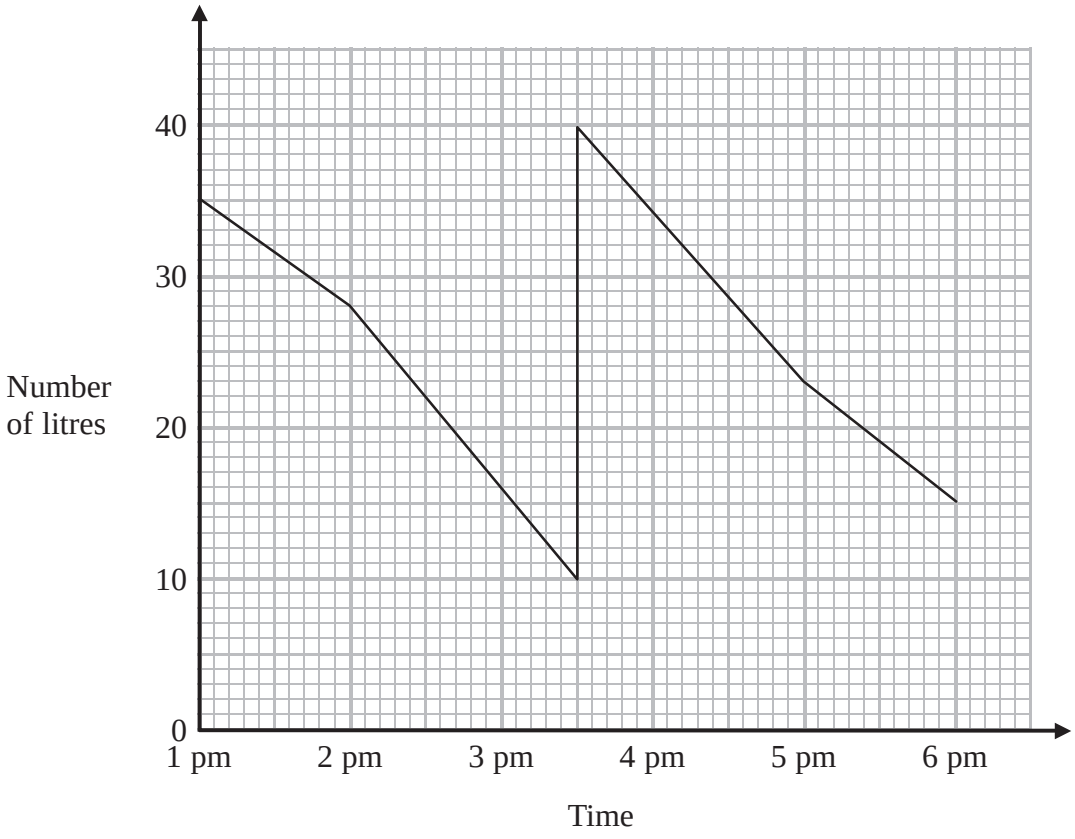
7.47 7.6 7.04 7.58 7.69

.....

(1)

(Total for Question 1 is 4 marks)

6 The graph gives information about the number of litres of petrol in the tank of Jim's car during a journey.



(a) How many litres of petrol were in the tank at 1 pm?

..... litres

(1)

At 3 30 pm Jim stopped and put some petrol into the tank.

(b) How many litres of petrol did Jim put into the tank?

..... litres

(1)

(c) Work out the total number of litres of petrol the car used between 1 pm and 6 pm.

..... litres

(2)

(Total for Question 6 is 4 marks)

7 Megan buys a frozen turkey.
She is going to defrost the turkey using these instructions.

Defrosting instructions

Allow 2 hours for each 450 g

The turkey weighs 5.4 kg.

(a) Work out how many hours it will take to defrost the turkey.

..... hours
(3)

Megan uses these instructions to cook the turkey.

1. Cook for 20 minutes per kg.
2. Cook for another 90 minutes.
3. Take out of oven.
4. Leave for 30 minutes.

The turkey will then be ready to eat.

The turkey weighs 5.4 kg.

Megan says,

"I will start to cook the turkey at 2 30 pm.
It will be ready to eat at 6 pm."

*(b) Is Megan correct?
You must show how you get your answer.

(4)

(Total for Question 7 is 7 marks)

26 Colin works on 5 days each week.
Each day he drives from his home to work and from work to his home.

Colin pays £3.50 each day to use the car park at work.

The distance from Colin's home to work is 18 miles.
Colin's car uses one gallon of petrol every 45.2 miles.

1 litre of petrol costs 136.9p
1 gallon = 4.546 litres

Work out the total cost for Colin to use his car for work each week.
You must show all your working.

£ .....

(Total for Question 26 is 5 marks)

4 The timetable shows the times of trains between Fratton and Portsmouth Harbour.

Fratton	2155	2158	2208	2219
Southsea	2158	2202	2211	2222
Portsmouth Harbour	2202	2205	2216	2226

John is going to travel by train from Fratton to Portsmouth Harbour to catch a ferry.

The last ferry of the day leaves at 2215
John must allow 8 minutes to get from the train to the ferry.

What is the time of the latest train from Fratton that John can catch?

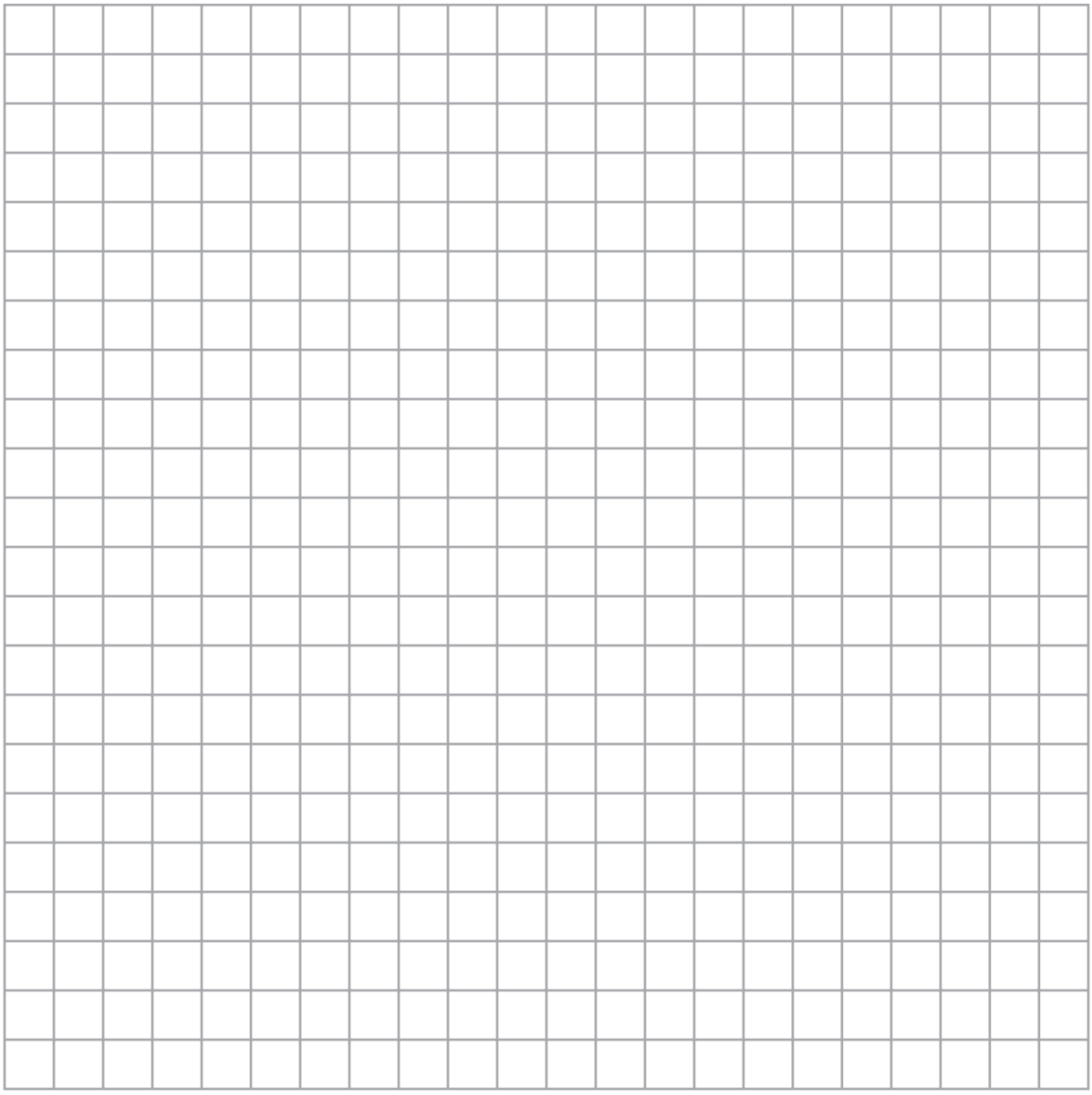
.....

(Total for Question 4 is 2 marks)

5 The table shows the temperatures, in °C, in Paris and in Nice on four days.

	Monday	**Tuesday**	**Wednesday**	**Thursday**
Temperature in Paris (°C)	14	15	17	15
Temperature in Nice (°C)	21	20	20	19

*(a) Show this information in a suitable diagram.



(4)

(b) Compare the temperatures in Paris and in Nice for the four days.

.....

.....

.....

(1)

(Total for Question 5 is 5 marks)

Question 299

7 Sameena has 10 m of ribbon on a reel.
She cuts 3 pieces of ribbon from the ribbon on the reel.

The lengths of the pieces are

41 cm
3.7 m
and 112 cm.

Work out how much ribbon Sameena will have left on the reel.

.....

(Total for Question 7 is 4 marks)

13 Andy is organising a trip to a play centre.
Here is some information about the prices at the centre.

Normal admission prices	
Adults	£3.00
Children 1–3 years	£6.25
Children 4–12 years	£8.25
Children under 1 year	Free

Group rate (for 10 or more children)
£5.50 per child
2 adults free with every 10 children
Other adults charged at £2.50 each

6 adults and 20 children will go on the trip.
The children are all 5 years old.

Work out how much Andy will save if he pays the group rate rather than normal admission prices.

You must show all your working.

£.....

(Total for Question 13 is 4 marks)

Question 301

1 (a) Write the number **six thousand and thirty seven** in figures.

.....

(1)

(b) Write the number 8377 correct to the nearest ten.

.....

(1)

(c) Write these numbers in order of size.
Start with the smallest number.

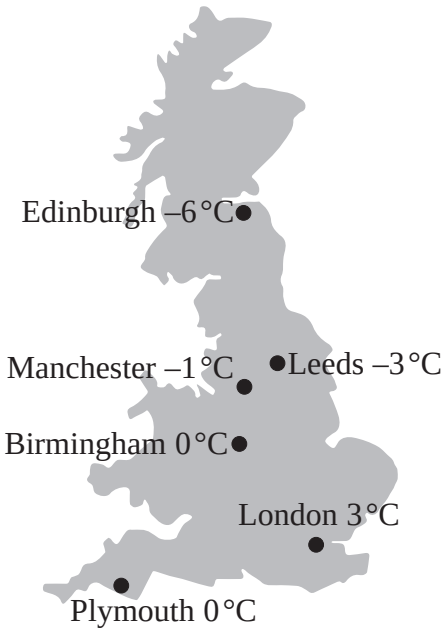
43 37 19 26 21

.....

(1)

(Total for Question 1 is 3 marks)

3



The diagram shows the temperatures in 6 cities at midnight one day.

(a) Which city had the highest temperature?

.....

(1)

(b) Work out the difference in temperature between

(i) Manchester and Edinburgh,

..... °C

(ii) London and Leeds.

..... °C

(2)

(Total for Question 3 is 3 marks)

Question 303

***5** A second class stamp costs 53 pence.

Hazel wants to buy 10 second class stamps.
She has £5 to spend on stamps.

Does Hazel have enough money to buy the stamps?

(Total for Question 5 is 2 marks)

***12** The diagram shows the floor plan of a room.

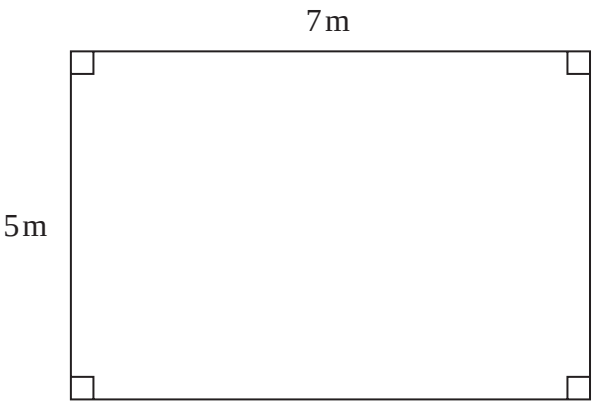


Diagram **NOT** accurately drawn

Shamus is going to put a border all around the room.

Borders are sold in rolls.

The table gives some information about three types of border.

Type	Length of roll (in metres)	Cost
Plain	3	£20
Patterned	2	£11
Textured	2.4	£14.50

Shamus is going to use only one type of border.

He has a budget of £150

Which of these types of border can Shamus afford to buy?

(Total for Question 12 is 5 marks)

17 Shelley sells books.

On Saturday she is going to give a free book mark and a free dust cover with each book she sells.
All the books are the same size.

Shelley needs to buy the book marks and the dust covers.

Book marks come in boxes.
Each box contains 24 book marks.

Dust covers come in packs.
Each pack contains 36 dust covers.

Shelley wants to have enough book marks and dust covers for 250 books.

She buys exactly the same number of book marks and dust covers.

Work out the number of boxes of book marks and the number of packs of dust covers she buys.
You must show all your working.

..... boxes of book marks

..... packs of dust covers

(Total for Question 17 is 4 marks)

4 Oliver orders some items from an electrical store.
Here is his bill.

(a) Complete the bill.

Live Wire Store			
Quantity	**Item**	**Unit price**	**Total**
2	Table lamps	£14.98	£29.96
5	Light switches	£6.40	£ .....
.....	Light bulbs	£1.83	£21.96
		Delivery charge	£5.00
		Total cost	£ .....

(3)

At the beginning of October, Oliver has £452.25 in his bank account.

During October, Oliver

puts £120 into his bank account
has £2.56 interest added to his bank account
spends £64.83 from his bank account.

(b) How much money is in Oliver's bank account at the end of October?

£ .....

(3)

(Total for Question 4 is 6 marks)

Question 307

7 Karen had 5 boxes of pens.
There were 60 pens in each box.

Karen gave 8 teachers 35 pens each.

Work out how many pens Karen has left.

.....

(Total for Question 7 is 3 marks)

***11** Jon is planning a trip to the theatre for 24 people.

Here are the costs for the trip.

Hire of a coach	£258
Ticket	£27.50 per person
Meal	£8.50 per person

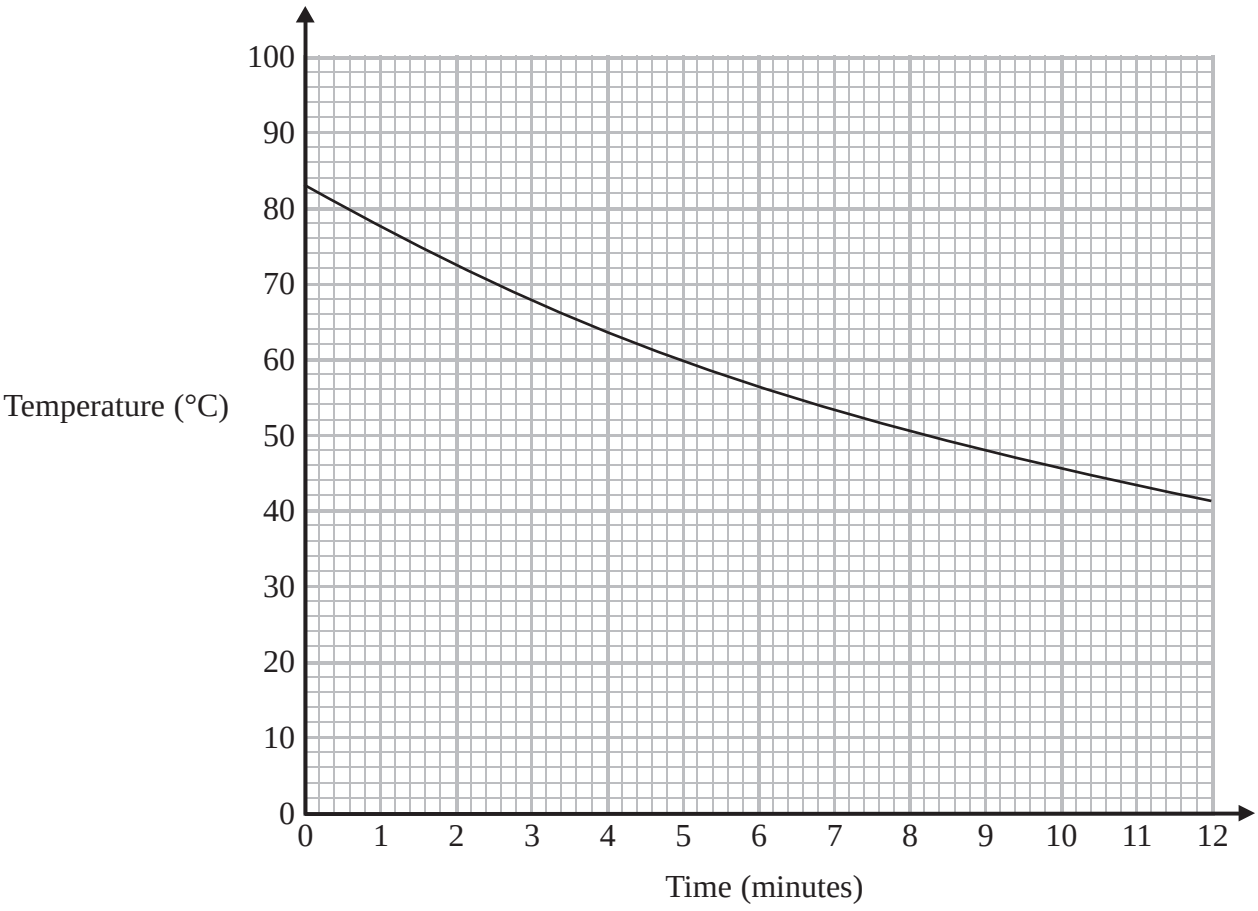
Jon is planning to charge each person £45 to cover the costs for the trip.

Is this enough?
You must show your working.

(Total for Question 11 is 3 marks)

12 A liquid is cooling.

The graph shows information about the time, in minutes, that the liquid has been cooling and its temperature in °C.



(a) Write down the temperature, in °C, of the liquid when it started to cool.

..... °C

(1)

It takes longer for the liquid to cool from 70°C to 60°C than it does for the liquid to cool from 80°C to 70°C.

(b) How much longer?
You must show how you get your answer.

..... minutes

(3)

(Total for Question 12 is 4 marks)

Question 310

16 (a) Work out 7.5^2

.....

(1)

(b) Work out $\sqrt{20 - 9.76}$

.....

(1)

(Total for Question 16 is 2 marks)

Question 311

***18** 3 litres of juice are needed to fill 15 identical glasses.

Are 5 litres of juice enough to fill 24 of these glasses?

(Total for Question 18 is 3 marks)

6 The time zone clock shows the times in four cities on Monday when it is 0900 in London.

London	New York	Moscow	Tokyo
0900	0400	1200	1700

(a) What is the difference between the time shown in London and the time shown in Tokyo?

..... hours

(1)

(b) What is the time in London when it is 1730 in Moscow?

.....

(1)

Richard goes by plane from London to New York.
The plane leaves when the time in London is 1400
The plane takes 9 hours to get to New York.

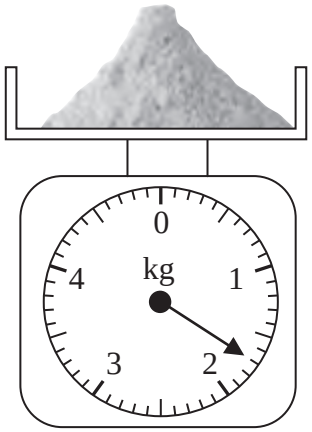
(c) What is the time in New York when the plane gets there?

.....

(2)

(Total for Question 6 is 4 marks)

8 Emma puts some flour on a weighing scale.



Emma needs 2 kg of flour.

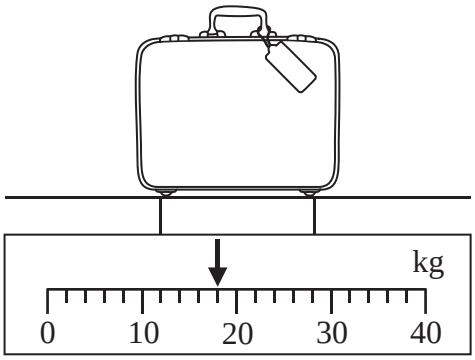
(a) How many more grams of flour does she need?

..... grams

(2)

Sanah's suitcase is weighed at an airport.

The weight of her suitcase is shown on the scale.



Sanah's suitcase weighs more than 15 kg, so she has to pay an excess baggage charge.
She has to pay £7 for each kg more than 15 kg.

(b) How much does Sanah have to pay?

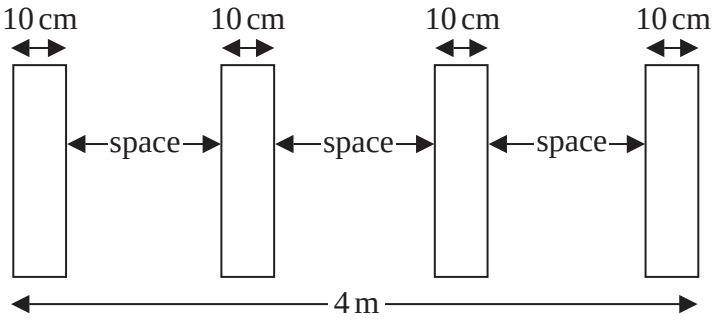
£ .....

(3)

(Total for Question 8 is 5 marks)

***10** Brian is making a fence.

Diagram **NOT** accurately drawn



The fence will be 4 m long.

Brian uses four posts.
Each post has a width of 10 cm.

Brian wants to have spaces of equal width between the posts.

Work out the width of each space.
You must show your working.

(Total for Question 10 is 4 marks)

14 Write these numbers in order of size.
Start with the smallest number.

35% $\frac{3}{10}$ 0.32 $\frac{2}{5}$ 0.25

.....

(Total for Question 14 is 2 marks)

1 (a) Write the number **five thousand nine hundred and six** in figures.

.....

(1)

(b) Write the number 7162 to the nearest hundred.

.....

(1)

(c) Write the number 27.53 to the nearest whole number.

.....

(1)

(d) Write these numbers in order of size.

Start with the smallest number.

5.45 3.67 6.03 5.08

.....

(1)

(Total for Question 1 is 4 marks)

3 There are 565 passengers on a train.
143 of the passengers get off the train.
109 passengers get on the train.

How many passengers are on the train now?

.....

(Total for Question 3 is 2 marks)

5 At 5am the temperature was –5°C.
By midday, the temperature had risen by 7°C.

(a) Work out the temperature at midday.

..... °C
(1)

At 5pm the temperature was 9°C.

(b) Work out the difference between the temperature at 5am and the temperature at 5pm.

..... °C
(1)

(Total for Question 5 is 2 marks)

7 Paula has £10 to spend on music downloads.
Each music download costs 84p.

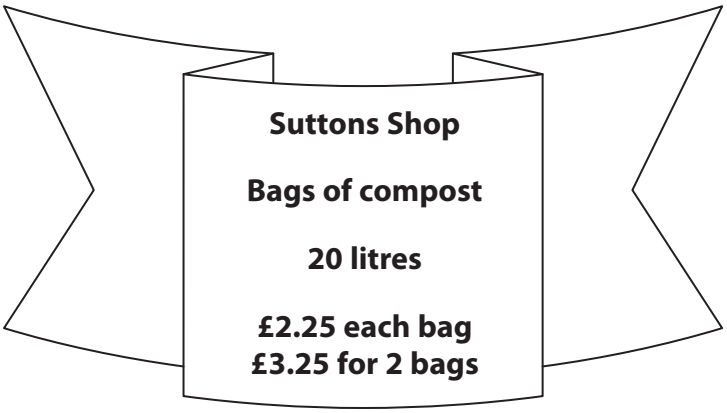
Paula buys as many music downloads as possible.

Work out how much money Paula has left.

.....

(Total for Question 7 is 3 marks)

***10** Jane wants to buy some compost.
Both Suttons Shop and Greens Garden Shop sell compost.





Jane needs 140 litres of compost.
She wants to buy all the compost from the same shop.
She wants to buy the compost as cheaply as possible.

Which shop should Jane buy the compost from?
You must show all your working.

(Total for Question 10 is 4 marks)

14 This rule is used to work out the cost of hiring a village hall.

Total cost = £8 for each hour plus a fixed charge of £5

Jackie hires the hall for 7 hours.

(a) Work out the total cost.

£.....

(2)

James pays £29 to hire the hall.

(b) Work out how many hours James hires the hall for.

..... hours

(3)

(Total for Question 14 is 5 marks)

5 Tom goes to a theme park.
There are 4 activities at the theme park.

The table gives information about these activities.

Activity	Start times			Time taken by activity (minutes)
Penguin feeding	10 45	12 15	13 45	35
Jeep safari	11 00	12 00	14 00	45
Steam train ride	10 15	11 40	14 00	25
Dolphin show	11 40	13 00	14 30	40

Tom wants to do all 4 activities.

He arrives at the theme park at 10 20
He needs to leave the theme park by 14 30

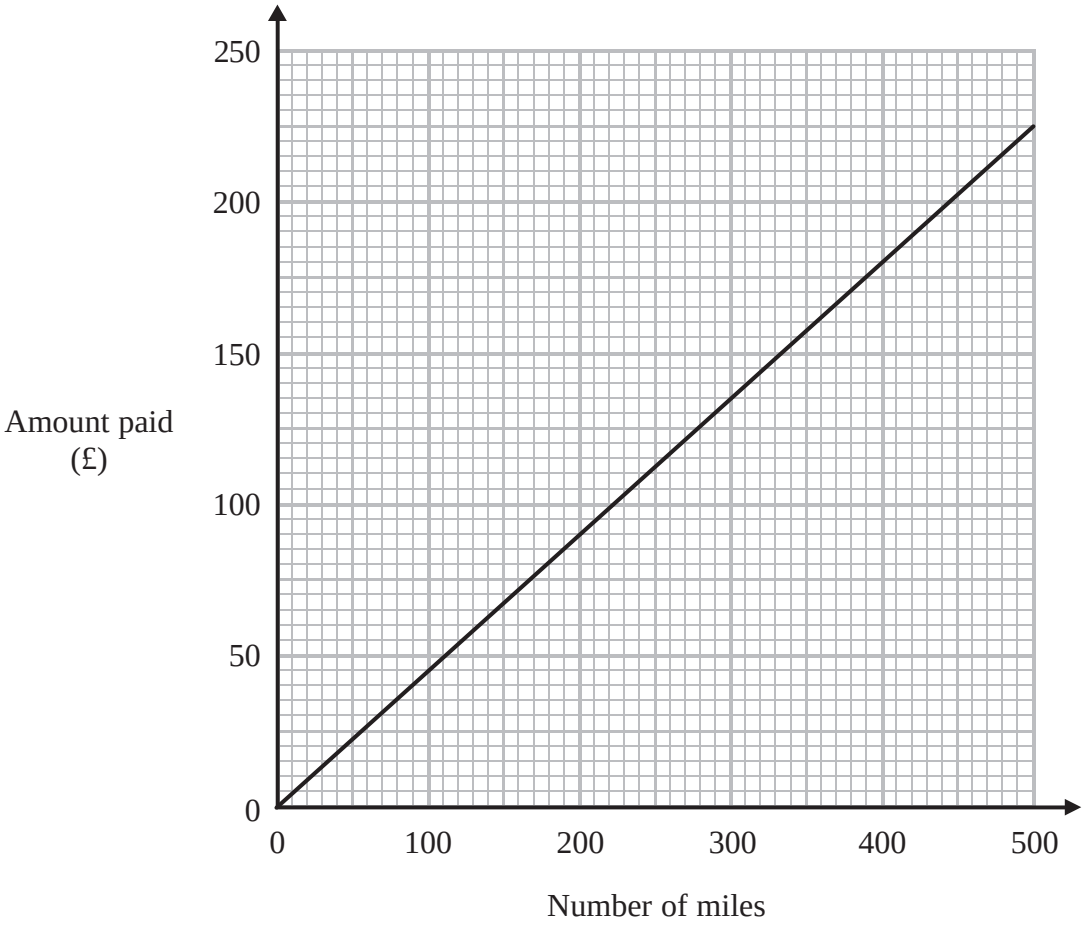
Plan a schedule for Tom's visit to the theme park so he can do all 4 activities.

Activity	Start time	Finish time

(Total for Question 5 is 3 marks)

12 Tony is paid for the number of miles he drives.

The graph gives information about the amount Tony is paid for the number of miles he drives.



Tony drives 700 miles.

(a) Work out the amount Tony is paid.

£.....

(2)

(b) Work out the amount Tony is paid for each mile he drives.

£.....

(2)

(Total for Question 12 is 4 marks)

3 At 7 am the temperature was −4 °C.
By 3 pm the temperature had gone up by 10 °C.

(a) Write down the temperature at 3 pm.

..... °C
(1)

At 9 pm the temperature was −2 °C.
By midnight the temperature had gone down by 7 °C.

(b) Write down the temperature at midnight.

..... °C
(1)

(Total for Question 3 is 2 marks)

4 The table shows the cost of a single train ticket and the cost of a return train ticket.

	Single ticket	Return ticket
Cost	£13.60	£20.30

(a) Work out the difference between the cost of two single tickets and the cost of one return ticket.

£.....

(3)

Tim catches a train to Bournemouth at 8 57 am.
The train gets to Bournemouth at 9 23 am.

(b) Work out how long the train takes to get to Bournemouth.

.....minutes

(1)

Tim catches the 17 23 train home.

(c) Write 17 23 using the 12-hour clock.

.....

(1)

(Total for Question 4 is 5 marks)

5 Lily has 3.4 kg of flour.
She uses 500 grams of the flour.

How much flour does Lily have left?

.....

(Total for Question 5 is 2 marks)

7 Here are four digits.

6 3 5 9

(a) Write down the largest three-digit number you can make using three of these digits.
You may only use a digit once.

.....

(1)

Here are the four digits again.

6 3 5 9

(b) Write down the three-digit number, whose value is closest to 600, that you can make using three of these digits.
You may only use a digit once.

.....

(1)

(Total for Question 7 is 2 marks)

***8** A company has a Norwich office and an Ipswich office.

30 people work in the Norwich office
and 20 people work in the Ipswich office.

On Tuesday

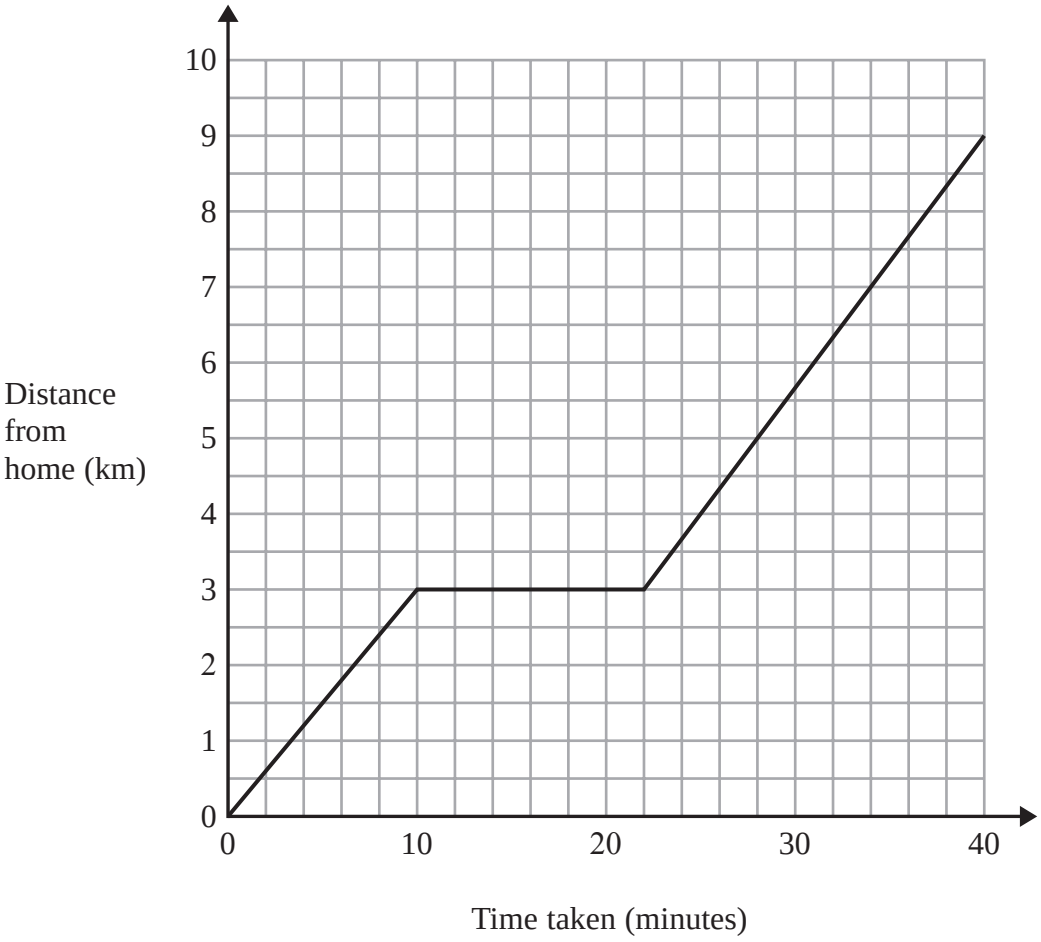
12 people from the Norwich office go to work in the Ipswich office
and 5 people from the Ipswich office go to work in the Norwich office.

Work out how many people should be working in the Norwich office and how many people should be working in the Ipswich office on Tuesday.

(Total for Question 8 is 3 marks)

13 One day Jane cycled from home to college.
She stopped at a shop on the way to college.

The travel graph shows Jane's journey from home to college.



(a) Write down the distance from Jane's home to college.

.....km
(1)

(b) Write down how long Jane stopped at the shop.

.....minutes
(1)

(Total for Question 13 is 2 marks)

2 Jill buys a toy, a doll and a game at a school fair.
She then sells all three items.

The table gives some information about these items.

Item	**Buys**	**Sells**	**Profit**
Toy	£2.00	£3.00	£1.00
Doll	£3.00	£	£1.50
Game	£5.00	£6.40	£ .....
		Total profit	£ .....

Complete the table.

(Total for Question 2 is 3 marks)

***3** Ami and Belinda are in a gymnastics competition.

Here are their scores.

	floor	vault	bars	beam
Ami	13.2	15.3	14.7	16.0
Belinda	14.3	13.8	15.9	15.7

Who got the higher total score, Ami or Belinda?
You must show your working.

(Total for Question 3 is 3 marks)

6 Here is a rule to work out the time it takes to cook a piece of meat.

Time in minutes = 36 × weight in kg + 30

A piece of meat has a weight of 4 kg.

(a) Use the rule to work out the time, in minutes, it takes to cook this piece of meat.

.....minutes
(2)

It takes 192 minutes to cook a different piece of meat.

(b) Work out the weight of this piece of meat.

.....kg
(3)

(Total for Question 6 is 5 marks)

***10** Sally wants her two children to go to a nursery for 3 days each week.

The box shows how much Sally will need to pay the nursery.

Up to 3 years old	£45 per day
More than 3 years old	£37 per day

Sally's two children are 2 years old and 4 years old.

Sally can only pay up to £250 each week for her two children to go to a nursery.

Can Sally pay for her two children to go to this nursery?
You must show all your working.

(Total for Question 10 is 4 marks)

11 Mick buys

apples for	£1.79
milk for	£1.20
cheese for	£3.53

He also buys

3 tins of beans at 48p each
and a pack of sausages.

Mick pays a total of £9.60

Work out how much he pays for the sausages.

£.....

(Total for Question 11 is 4 marks)

13 A ticket for a show costs £46

Sofyan has £180 to spend on tickets.
He buys as many tickets as possible.

How much money does Sofyan have left?

£.....

(Total for Question 13 is 3 marks)

14 Use your calculator to work out

(i) $-5-6$

.....

(ii) 1.3^2

.....

(iii) $\sqrt{12.25}$

.....

(iv) 8^3

.....

(Total for Question 14 is 4 marks)

20 (a) Write 3500 m*l* in litres.

..... litres
(1)

(b) Write 3 kilograms in grams.

..... grams
(1)

(c) Change 3 m^2 to cm^2.

..... cm^2
(2)

(Total for Question 20 is 4 marks)

***22** There are 1 million gallons of water in a lake.

A company has to pump all the water out of the lake.

The company can use 4 Speedy pumps or 5 Flow pumps.

One Speedy pump can pump 35 gallons out of the lake in 1 minute.
One Flow pump can pump all the water out of the lake in 500 hours.

The company wants to pump all the water out of the lake as quickly as possible.

Should the company use the 4 Speedy pumps or the 5 Flow pumps?
You must show all your working.

(Total for Question 22 is 5 marks)

Question 339

***4** Mr and Mrs Shankara and their 3 children go on a train journey.

Mr Shankara pays for 2 adult tickets and 3 child tickets.
The price of an adult ticket is £8.40
The price of a child ticket is half the price of an adult ticket.

Mr Shankara pays for the tickets with 3 ten pound notes.

Work out how much change he should get.

(Total for Question 4 is 4 marks)

7 Here is Katya's fitness plan for one week.

On the first 4 days of the week, run 1500 metres each day.
On the last 3 days of the week, run 3 kilometres each day.

Katya uses her fitness plan for one week.

Work out the total distance she runs.

.....

(Total for Question 7 is 3 marks)

***8** Here are the instructions to work out the time, in minutes, needed to cook a chicken.

	25 minutes for each $\frac{1}{2}$ kg
then	add 15 minutes

Lawrence is going to cook a chicken.
The chicken has a weight of 2 kg.

Lawrence wants to finish cooking the chicken at 6 30 pm.

Work out the time he should start to cook the chicken.

(Total for Question 8 is 4 marks)

11 The table shows the temperatures in some cities at midnight one night.

City	Temperature at midnight
Cardiff	+4 °C
Leeds	−2 °C
London	+3 °C
Newcastle	−4 °C
Truro	+4 °C

(a) Which city has the lowest temperature at midnight?

.....

(1)

(b) Work out the difference between the temperatures at midnight in Leeds and in Truro.

..... °C

(1)

Between midnight and noon the next day the temperature in London fell by 7 °C.

(c) Work out the temperature at noon the next day in London.

..... °C

(1)

(d) Work out the mean of the five temperatures in the table.

..... °C

(2)

(Total for Question 11 is 5 marks)

3 The price of a calculator depends on the number of these calculators you buy.

The table gives information about the prices of this calculator.

Number of calculators	Price of each calculator
1–29	£3.85
30–99	£3.65
100 or more	£3.49

Mr Edwards wants to buy some of these calculators.
He has £200 to spend.

Work out the greatest number of calculators he can buy.

.....

(Total for Question 3 is 3 marks)

Question 344

9 Ben hires some buses to take 768 people to a football match.
Each bus can take 56 people.

Ben hires the least number of buses needed to take all 768 people.

Then 19 of the 768 people decide **not** to go to the football match.

Does Ben still need all the buses he has hired?
You must show how you get your answer.

(Total for Question 9 is 3 marks)

11 Here is part of a train timetable from Cambridge to London Kings Cross.

Cambridge	08 15	08 50	09 20	09 27	09 50
Royston	08 29	09 05	09 35	09 44	10 05
Letchworth	08 39	09 14	09 44	09 55	10 14
London Kings Cross	09 10	09 45	10 13	10 32	10 43

Matt is going to catch a train from Cambridge.
He needs to get to Letchworth **before** 10 00

(a) Write down the time of the latest train Matt can catch from Cambridge.

.....

(1)

The 09 35 train left Royston on time.

The train took 50 minutes to travel from Royston to London Kings Cross.
The train was late when it got to London Kings Cross.

(b) How many minutes late?

..... minutes

(2)

(Total for Question 11 is 3 marks)

***16** This sign is on a bridge.

Low bridge
Maximum height of vehicle
4.4 metres

The height of a bus is 14 feet 4 inches.

12 inches = 1 foot
1 inch = 2.54 cm

Can the bus go under the bridge?
You must show how you get your answer.

(Total for Question 16 is 3 marks)

Question 347

17 One kilogram of cheese costs £9.68
Chris buys 650 g of this cheese.

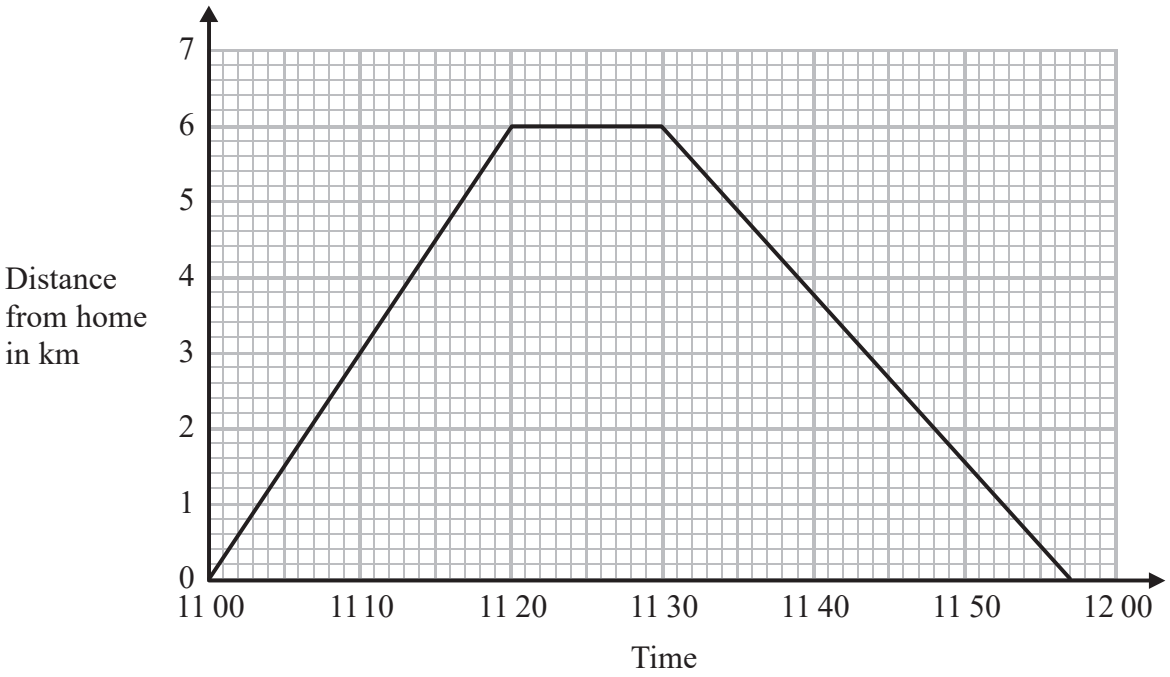
Work out how much Chris pays.

£.....

(Total for Question 17 is 3 marks)

18 Amina cycled from her home to a shop.
She then cycled home.

The travel graph shows information about Amina's journey.



At 11 20 Amina stopped to go into the shop.

(a) How many minutes did Amina stop for?

..... minutes
(1)

Amina took more time to cycle home from the shop than she took to cycle to the shop.

(b) How many minutes more?

..... minutes
(2)

(c) What was the total distance Amina cycled?

..... km
(1)

(Total for Question 18 is 4 marks)

20 Write these numbers in order of size.
Start with the smallest number.

$\frac{3}{7}$ 41% 0.45 $\frac{2}{5}$ 0.405

.....

(Total for Question 20 is 2 marks)

28 Gemma has the same number of sweets as Betty.

Gemma gives 24 of her sweets to Betty.
Betty now has 5 times as many sweets as Gemma.

Work out the total number of sweets that Gemma and Betty have.

.....

(Total for Question 28 is 4 marks)

***29** The diagram shows a plan of Brian's lawn.

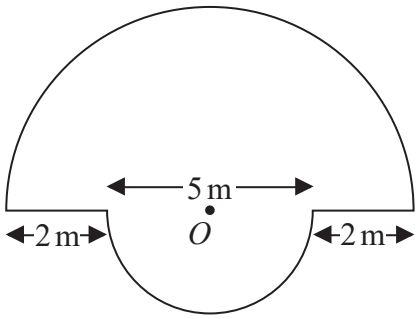


Diagram **NOT** accurately drawn

The edge of the lawn consists of two semicircles and two straight lines.
Each semicircle has centre O.
The diameters of the semicircles are 9 m and 5 m.

Brian is going to put lawn edging around the edge of the lawn.
Lawn edging is sold in 2.4 metre rolls.

Brian has £35

Has Brian got enough money to buy all the rolls of lawn edging he needs?
You must show all your working.

Lawn edging

£3.99 per roll
or
3 rolls for £10

(Total for Question 29 is 5 marks)

Question 352

1 Work out the value of 2^4

.....

(Total for Question 1 is 1 mark)

Question 353

7 Fahima buys

2 packets of bread rolls costing £1.50 for each packet
1 bottle of ketchup costing £1.60
3 packets of sausages

Fahima pays with a £10 note.
She gets 30p change.

Fahima works out that one packet of sausages costs £2.30

Is Fahima right?
You must show how you get your answer.

(Total for Question 7 is 3 marks)

Question 354

June 2017 | 1MA1/1F | Original Q8

8 (a) Work out $\frac{5}{8} \times \frac{3}{4}$

.....

(1)

(b) Work out $\frac{2}{3} - \frac{1}{4}$

.....

(2)

(Total for Question 8 is 3 marks)

Question 355

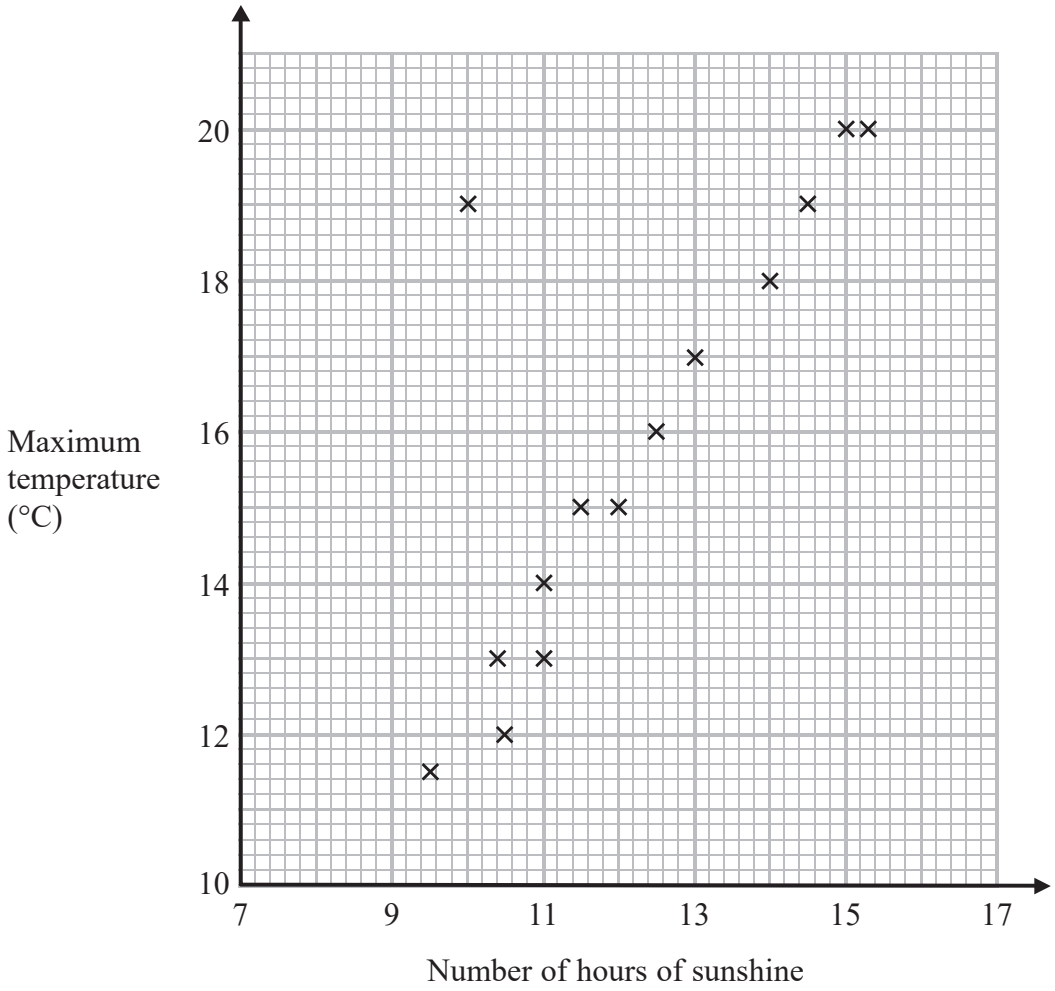
17 5 tins of soup have a total weight of 1750 grams.
4 tins of soup and 3 packets of soup have a total weight of 1490 grams.

Work out the total weight of 3 tins of soup and 2 packets of soup.

..... grams

(Total for Question 17 is 4 marks)

21 The scatter graph shows the maximum temperature and the number of hours of sunshine in fourteen British towns on one day.



One of the points is an outlier.

(a) Write down the coordinates of this point.

(..... , ...)

(1)

(b) For all the other points write down the type of correlation.

.....

(1)

On the same day, in another British town, the maximum temperature was 16.4 °C.

(c) Estimate the number of hours of sunshine in this town on this day.

..... hours
(2)

A weatherman says,

"Temperatures are higher on days when there is more sunshine."

(d) Does the scatter graph support what the weatherman says?
Give a reason for your answer.

.....

.....

(1)

(Total for Question 21 is 5 marks)

Question 357

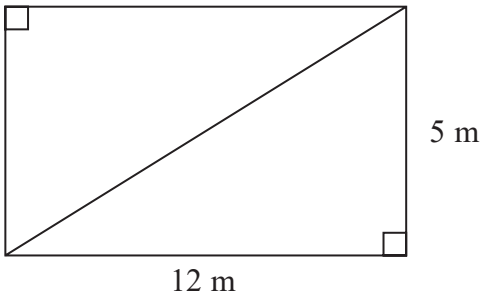
June 2017 | 1MA1/1F | Original Q23

23 Work out 54.6×4.3

.....

(Total for Question 23 is 3 marks)

25 This rectangular frame is made from 5 straight pieces of metal.



The weight of the metal is 1.5 kg per metre.

Work out the total weight of the metal in the frame.

..... kg

(Total for Question 25 is 5 marks)

4 Here are four fractions.

$$\frac{2}{5} \qquad \frac{11}{30} \qquad \frac{1}{2} \qquad \frac{7}{15}$$

Write these fractions in order of size.
Start with the smallest fraction.

.....

(Total for Question 4 is 2 marks)

6 There are 495 coins in a bottle.

$\frac{1}{3}$ of the coins are £1 coins.
124 of the coins are 50p coins.
The rest of the coins are 20p coins.

Work out the total value of the 495 coins.

£.....

(Total for Question 6 is 4 marks)

10 Suha is going to buy 150 envelopes.

Here is some information about the cost of envelopes in two shops.

Letters2send	**Stationery World**
Pack of 25 envelopes for £3.49	Pack of 10 envelopes for £2.10 Buy 2 packs get 1 pack free

Suha wants to buy the envelopes as cheaply as possible.

Which shop should Suha buy the 150 envelopes from?
You must show how you get your answer.

(Total for Question 10 is 4 marks)

Question 362

12 Find the value of $\dfrac{\sqrt{13.4 - 1.5}}{(6.8 + 0.06)^2}$

Write down all the figures on your calculator display.

.....

(Total for Question 12 is 2 marks)

1 The table shows the lengths of five rivers.

River	Length (km)
Trent	297
Don	112
Severn	354
Thames	346
Mersey	113

(a) Write down the rivers in order of length.

Start with the shortest river.

.....

.....

(1)

Ami says,

"The River Thames is more than three times as long as the River Don."

(b) Show that Ami is correct.

.....

.....

(1)

(Total for Question 1 is 2 marks)

3 Here are four digits.

5 6 1 9

(i) Write down the smallest possible two digit number that can be made with two of the digits.

.....

(1)

(ii) Write down the three digit number closest to 200 that can be made with three of the digits.

.....

(1)

(Total for Question 3 is 2 marks)

8 Joanne wants to buy a dishwasher.

The dishwasher costs £372

Joanne will pay a deposit of £36
She will then pay the rest of the cost in 4 equal monthly payments.

How much is each monthly payment?

£.....

(Total for Question 8 is 2 marks)

9 Davos is a cleaner.

The table shows information about the time it will take him to clean each of four rooms in a house.

Room	Time
Kitchen	2 hours
Sitting room	1 hour 40 minutes
Bedroom	$1\frac{1}{2}$ hours
Bathroom	45 minutes

Davos wants to clean all four rooms in one day.
He will have breaks for a total time of 75 minutes.

Davos is going to start cleaning at 9 am.

Will he finish cleaning by 4 pm?
You must show all your working.

(Total for Question 9 is 3 marks)

2 Work out $2 + 7 \times 10$

.....

(Total for Question 2 is 1 mark)

4 Here are four numbers.

$$-9 \qquad -2 \qquad 2 \qquad 9$$

Write one of these numbers in each box to make a correct calculation.

$$\square + \square = -7$$

(Total for Question 4 is 1 mark)

9 Jacqui wants to work out $3480 \div 5$

She knows that $3480 \div 10 = 348$

Jacqui writes $3480 \div 5 = 174$

because $10 \div 5 = 2$

and $348 \div 2 = 174$

What mistake did Jacqui make in her method?

.....

.....

(Total for Question 9 is 1 mark)

20 Ami and Josh use a calculator to work out $\dfrac{595}{4.08^2 + 5.3}$

Ami's answer is 27.1115
Josh's answer is 271.115

One of these answers is correct.

Use approximations to find out which answer is correct.

(Total for Question 20 is 3 marks)

22 (a) Work out $\frac{2}{5} + \frac{1}{4}$

.....

(2)

(b) Write down the value of 2^{-3}

.....

(1)

(Total for Question 22 is 3 marks)

Question 372

5 Thais has a large bottle of shampoo.
There are 2 litres of shampoo in the large bottle.

Thais also has some empty small bottles.
Each small bottle can be completely filled with 150 m*l* of shampoo.

How many small bottles can be completely filled with shampoo from the large bottle?

.....

(Total for Question 5 is 3 marks)

Question 373

12 2.5 kg of apples cost £3.60

Work out the cost of 3.5 kg of apples.

£.....

(Total for Question 12 is 2 marks)

23 (a) Find the value of the reciprocal of 1.6
Give your answer as a decimal.

.....

(1)

Jess rounds a number, x, to one decimal place.
The result is 9.8

(b) Write down the error interval for x.

.....

(2)

(Total for Question 23 is 3 marks)

Question 375

November 2017 | 1MA1/3F | Original Q25

25 Work out $(13.8 \times 10^{7}) \times (5.4 \times 10^{-12})$
Give your answer as an ordinary number.

.....

(Total for Question 25 is 2 marks)

Question 376

June 2018 | 1MA1/1F | Original Q2

2 (a) Write the following numbers in order of size.
Start with the smallest number.

−6 6 −5 0 12

.....

(1)

(b) Write the following numbers in order of size.
Start with the smallest number.

0.078 0.78 0.87 0.708

.....

(1)

(Total for Question 2 is 2 marks)

Question 377

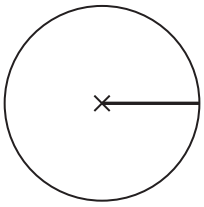
8 3 kg of meat costs £54
Nina buys 2 kg of the meat.

Work out how much Nina pays.

£ .....

(Total for Question 8 is 2 marks)

9 The centre of this circle is marked with a cross (×).

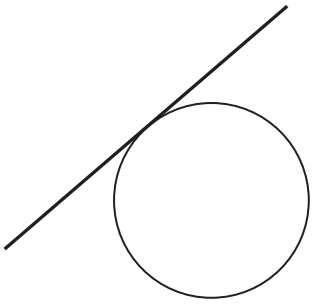


(a) Write down the mathematical name of the straight line shown in the circle.

.....

(1)

(b) Write down the mathematical name of the straight line that is touching the circle.



.....

(1)

(Total for Question 9 is 2 marks)

10 Tim and three friends go on holiday together for a week.

The 4 friends will share the costs of the holiday equally.

Here are the costs of the holiday.

£1280 for 4 return plane tickets
£640 for the villa
£220 for hire of a car for the week

Work out how much Tim has to pay for his share of the costs.

£ .....

(Total for Question 10 is 3 marks)

13 A piece of wire is 240 cm long.

Peter cuts two 45 cm lengths off the wire.
He then cuts the rest of the wire into as many 40 cm lengths as possible.

Work out how many 40 cm lengths of wire Peter cuts.

.....

(Total for Question 13 is 3 marks)

Question 381

June 2018 | 1MA1/2F | Original Q3

3 Work out the value of 3^5

.....

(Total for Question 3 is 1 mark)

Question 382

June 2018 | 1MA1/2F | Original Q4

4 Write down a 6 digit number that has 4 as its thousands digit.
You can only use the digit 4 once.

.....

(Total for Question 4 is 1 mark)

8 Neil buys 30 pens, 30 pencils, 30 rulers and 30 pencil cases.

Price list	
pens	6 for 82p
pencils	15 for 45p
rulers	10 for £1.25
pencil cases	37p each

What is the total amount of money Neil spends?

£.....

(Total for Question 8 is 5 marks)

16 Marla buys some bags of buttons.

There are 19 buttons or 20 buttons or 21 buttons or 22 buttons in each bag.

The table gives some information about the number of buttons in each bag.

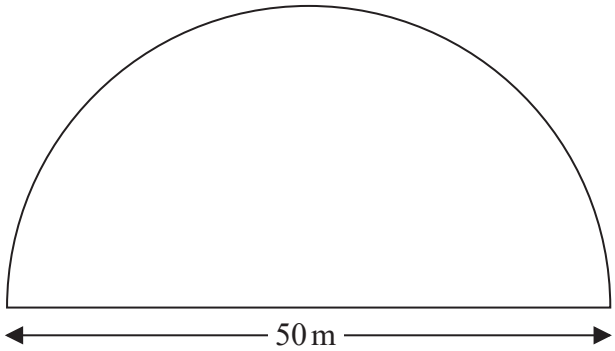
Number of buttons	Frequency
19	.....
20	7
21	3
22	1

The total number of buttons is 320

Complete the table.

(Total for Question 16 is 3 marks)

19 A farmer has a field in the shape of a semicircle of diameter 50 m.



The farmer asks Jim to build a fence around the edge of the field.
Jim tells him how much it will cost.

Total cost = £29.86 per metre of fence plus £180 for each day's work

Jim takes three days to build the fence.

Work out the total cost.

£.....

(Total for Question 19 is 5 marks)

5 Here are four digits.

7 3 4 9

(a) Use three of these digits to write down the largest possible 3-digit number.

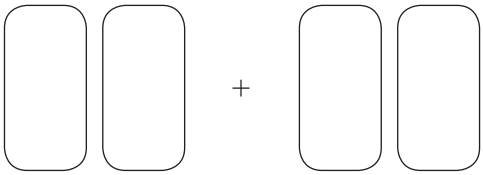
.....

(1)

(b) Here are four different digits.

8 2 1 6

Put one of these digits in each box to give the smallest possible answer to the sum.
You must use each digit only once.



(1)

(Total for Question 5 is 2 marks)

Question 387

7 David has twice as many cousins as Becky.
Becky has twice as many cousins as Nishat.

Nishat has 6 cousins.

How many cousins does David have?

.....

(Total for Question 7 is 2 marks)

8 (a) Find the value of $\sqrt{1.44 \times 3.61}$

.....

(1)

(b) Find the value of $(3.54 - 0.96)^2 - 4.096$

.....

(2)

(Total for Question 8 is 3 marks)

9 This is part of a bus timetable between Bury and Manchester.

Bury	08 25	08 55	09 15	09 30	09 45	10 05
Whitefield	08 34	09 04	09 24	09 39	09 54	10 14
Heaton Park	08 46	09 16	09 36	09 51	10 06	10 27
Cheetham	08 56	09 26	09 46	10 01	10 16	10 37
Manchester	09 05	09 35	09 55	10 10	10 25	10 48

(a) How many minutes should the 08 25 bus take to go from Bury to Manchester?

..... minutes
(1)

Daniel goes from Whitefield to Manchester by bus.

Daniel takes 17 minutes to get from his house to the bus stop in Whitefield.
He takes 15 minutes to get from the bus stop in Manchester to work.

Daniel has to get to work by 10 am.
He leaves his house at 8.45 am.

(b) Does Daniel get to work by 10 am?
You must show all your working.

(3)

(Total for Question 9 is 4 marks)

Question 390

November 2018 | 1MA1/1F | Original Q1

1 Write the following numbers in order of size.
Start with the smallest number.

0.4 0.02 0.37 0.152 0.2

.....

(Total for Question 1 is 1 mark)

Question 391

November 2018 | 1MA1/1F | Original Q5

5 (a) Work out $3 \times 5 + 7$

.....

(1)

(b) Work out 2^3

.....

(1)

(c) Write brackets ( ) in this statement to make it correct.

$$7 \times 2 + 3 = 35$$

(1)

(Total for Question 5 is 3 marks)

6 Sue has 2 cats.

Each cat eats $\frac{1}{4}$ of a tin of cat food each day.

Sue buys 8 tins of cat food.

Has Sue bought enough cat food to feed her 2 cats for 14 days?
You must show how you get your answer.

(Total for Question 6 is 3 marks)

Question 393

9 $g = 9$
$h = 4$

Work out the value of $2g + 3h$

.....

(Total for Question 9 is 2 marks)

Question 394

20 Work out the value of $\dfrac{3^7 \times 3^{-2}}{3^3}$

.....

(Total for Question 20 is 2 marks)

23 It would take 120 minutes to fill a swimming pool using water from 5 taps.

(a) How many minutes will it take to fill the pool if only 3 of the taps are used?

..... minutes

(2)

(b) State one assumption you made in working out your answer to part (a).

.....

.....

(1)

(Total for Question 23 is 3 marks)

Question 396

1 Write down the value of the 4 in the number 542.3

.....

(Total for Question 1 is 1 mark)

Question 397

November 2018 | 1MA1/2F | Original Q3

3 (a) Change 4560 g into kg.

.....kg

(1)

(b) Change 7.3 m into mm.

.....mm

(1)

(Total for Question 3 is 2 marks)

Question 398

6 Here are four fractions.

$$\frac{3}{4} \qquad \frac{5}{7} \qquad \frac{19}{25} \qquad \frac{11}{15}$$

Write the fractions in order of size.
Start with the smallest fraction.

.....

(Total for Question 6 is 2 marks)

17 Adrian is going to make concrete.
He is going to use

180 kg of cement
375 kg of sand
1080 kg of stone

Cement, sand and stone are sold in bags.

1 bag cement	1 bag sand	1 bag stone
25 kg	22.5 kg	50 kg

Adrian already has

10 bags of cement
20 bags of sand
20 bags of stone

Work out what bags he needs to buy to make the concrete.

(Total for Question 17 is 3 marks)

Question 400

1 Write a number in each box to make the calculation correct.

(i) $56.3 + \square = 100$

(1)

(ii) $\frac{2}{7} + \square = 1$

(1)

(Total for Question 1 is 2 marks)

Question 401

4 Work out $\frac{1}{8}$ of 720

.....

(Total for Question 4 is 1 mark)

Question 402

7 Shaun is 1.88 m tall.

David is 6 cm taller than Shaun.

How tall is David?

.....

(Total for Question 7 is 2 marks)

8 2 pens cost £2.38
5 folders cost £5.60

Ben wants to buy 20 pens and 20 folders.
He only has £50

Does Ben have enough money to buy 20 pens and 20 folders?
You must show how you get your answer.

(Total for Question 8 is 4 marks)

13 Annie sold

45 books at £1.20 each
34 candles at £1.50 each
some calendars at 90p each

She got a total of £150

Work out how many calendars Annie sold.

.....

(Total for Question 13 is 4 marks)

20 (a) Write 7357 correct to 3 significant figures.

.....

(1)

(b) Work out $\dfrac{\sqrt{17 + 4^2}}{7.3^2}$

Write down all the figures on your calculator display.

.....

(2)

(Total for Question 20 is 3 marks)

Question 406

1 Write 180 minutes in hours.

..... hours

(Total for Question 1 is 1 mark)

3 Work out $10 \times (3 + 5)$

.....

(Total for Question 3 is 1 mark)

Question 408

June 2019 | 1MA1/1F | Original Q5

5 Find the number that is exactly halfway between 7 and 15

.....

(Total for Question 5 is 1 mark)

6 Harry is planning a holiday for 4 people for 7 days.

Here are the costs for the holiday for **each person**.

Travel	£150
Hotel	£50 for each day
Spending money	£250

Work out the total cost of the holiday for 4 people for 7 days.

£.....

(Total for Question 6 is 4 marks)

8 Write the following fractions in order of size.
Start with the smallest fraction.

$$\frac{1}{3} \qquad \frac{3}{4} \qquad \frac{1}{4} \qquad \frac{7}{12} \qquad \frac{1}{2}$$

.....

(Total for Question 8 is 2 marks)

11 Work out 74×58

.....

(Total for Question 11 is 2 marks)

15 (a) Write down the value of $\sqrt{64}$

.....

(1)

(b) Work out the value of 5^3

.....

(1)

(Total for Question 15 is 2 marks)

18 The diagram shows a rectangular garden path.



Wasim is going to cover the path with paving stones.
Each paving stone is a square of side 30 cm.
Each paving stone costs £2.50

Wasim has £220 to spend on paving stones.

Show that he has enough money to buy all the paving stones he needs.

(Total for Question 18 is 4 marks)

23 Deon needs 50 g of sugar to make 15 biscuits.

She also needs
three times as much flour as sugar
two times as much butter as sugar

Deon is going to make 60 biscuits.

(a) Work out the amount of flour she needs.

..... g
(3)

Deon has to buy all the butter she needs to make 60 biscuits.
She buys the butter in 250 g packs.

(b) How many packs of butter does Deon need to buy?

.....
(2)

(Total for Question 23 is 5 marks)

2 Write the following numbers in order of size.
Start with the smallest number.

–3 4 0 –1 2

.....

(Total for Question 2 is 1 mark)

Question 416

5 Write the number two million in figures.

.....

(Total for Question 5 is 1 mark)

6 Dave goes into a cafe and buys 2 cups of coffee and a piece of cake.

Each cup of coffee costs £2.75
The cake costs £2.90

Dave pays with a £10 note.

He thinks he will get more than £1.50 in change.

Is Dave correct?
You must show how you get your answer.

(Total for Question 6 is 3 marks)

10 Here are three symbols.

<	>	=

Write one of these symbols in each box to make four true statements.

$14 \square 21$

$4 + 7 \square 103 - 92$

$2^2 \square 2 \times 2$

$-3 \square -5$

(Total for Question 10 is 2 marks)

12 Here is part of a train timetable.

Brighton	07 22	07 29	07 32
London	09 00	08 32	08 48

Graham gets to the station in Brighton at 07 15

(a) Work out how many minutes he has to wait until 07 22

..... minutes

(1)

(b) Work out how long it will take the 07 22 train to get to London.

.....

(2)

(Total for Question 12 is 3 marks)

Question 420

17 There are 84 calories in 100 g of banana.
There are 87 calories in 100 g of yogurt.

Priti has 60 g of banana and 150 g of yogurt for breakfast.

Work out the total number of calories in this breakfast.

.....

(Total for Question 17 is 4 marks)

18 Machine A and machine B both make car parts.

Machine A makes 6 parts every 10 minutes.
Machine B makes 13 parts every 15 minutes.

On Monday
machine A makes parts for 12 hours
machine B makes parts for 10 hours

Work out the total number of parts made by the two machines on Monday.

.....

(Total for Question 18 is 4 marks)

Question 422

4 Here is a list of numbers.

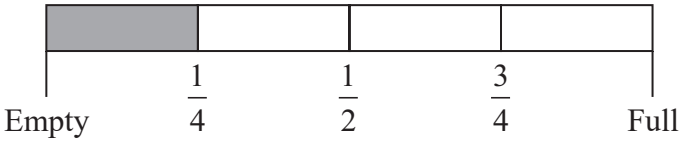
4 6 9 10 15 27 30 40

From the list, write down all the numbers that are powers of 3

.....

(Total for Question 4 is 1 mark)

8 Here is the gauge for the fuel tank of a car.



The fuel tank holds 52 litres of fuel when the tank is full.

The tank is $\frac{1}{4}$ full of fuel.

Work out how many more litres of fuel are needed to fill the tank.

..... litres

(Total for Question 8 is 3 marks)

Question 424

1 Write down the value of the 7 in the number 1074

.....

(Total for Question 1 is 1 mark)

Question 425

3 Work out 31.7×100

.....

(Total for Question 3 is 1 mark)

Question 426

7 Work out the difference, in minutes, between 1 hour 25 minutes and $1\frac{1}{4}$ hours.

..... minutes

(Total for Question 7 is 2 marks)

8 Prasha has five blocks of wood.

The total weight of all five blocks of wood is 3 kilograms.
4 of the blocks of wood each have a weight of 650 grams.

Work out the weight, in grams, of the other block of wood.

..... grams

(Total for Question 8 is 3 marks)

Question 428

November 2019 | 1MA1/1F | Original Q14

14 Work out 23×15

.....

(Total for Question 14 is 2 marks)

Question 429

17 $x - 1 = 2$

Work out the value of $2x^2$

.....

(Total for Question 17 is 3 marks)

Question 430

November 2019 | 1MA1/2F | Original Q1

1 Write these numbers in order of size.
Start with the smallest number.

8 −4 1 −7 −2

.....

(Total for Question 1 is 1 mark)

6 There are 14 rows of seats in a cinema.
There are 15 seats in each row.

A film was shown in the cinema on Saturday.
Each ticket for the film cost £6.50

The tickets that were sold cost a total of £1274

How many tickets were **not** sold?

.....

(Total for Question 6 is 3 marks)

10 Here is the charge at a car park in Spain.

Car park
0.024 euros per minute

Jon parked his car in this car park.

Jon drove into the car park at 10 45
When he drove out of the car park he had to pay 8.40 euros.

At what time did Jon drive out of the car park?

.....

(Total for Question 10 is 3 marks)

11 Dylan buys 13 bicycle lights for £7.50 each.
He pays with five £20 notes.

(a) How much change should Dylan get?

£.....
(3)

The normal price of a bicycle is £120

In a sale, there is $\frac{1}{5}$ off the normal price of the bicycle.

(b) Work out the price of the bicycle in the sale.

£.....
(2)

(Total for Question 11 is 5 marks)

12 Cornflakes are sold in two sizes of box.

Size of box	Weight of cornflakes
small	450 g
large	750 g

Rae buys 3 small boxes of cornflakes and some large boxes of cornflakes.
In total she buys 5850 g of cornflakes.

Work out the number of large boxes of cornflakes Rae buys.

.....

(Total for Question 12 is 3 marks)

23 (a) Use your calculator to work out $\dfrac{29^2 - 4.6}{\sqrt{35 - 1.9^3}}$

Write down all the figures on your calculator display.

.....

(2)

(b) Write your answer to part (a) correct to 4 significant figures.

.....

(1)

(Total for Question 23 is 3 marks)

Question 436

November 2020 | 1MA1/1F | Original Q1

1 Write the following numbers in order of size.
Start with the smallest number.

0.32 0.4 0.35 0.309

.....

(Total for Question 1 is 1 mark)

5 Write down the value of the 7 in the number 8765

.....

(Total for Question 5 is 1 mark)

10 Jenny has 12 marbles.

$\frac{1}{4}$ of these 12 marbles are large.

The rest of these 12 marbles are small.

Each large marble has a weight of 70 grams.
Each small marble has a weight of 50 grams.

Work out the total weight of the 12 marbles.

..... grams

(Total for Question 10 is 4 marks)

15 Jamil makes a drink by mixing
1 part of orange squash with 9 parts of water.

He uses 750 millilitres of orange squash.

Jamil is going to put the drink he has mixed into 1 litre bottles.

Work out the greatest number of 1 litre bottles that Jamil can completely fill.

.....

(Total for Question 15 is 3 marks)

Question 440

November 2020 | 1MA1/1F | Original Q28

28 Write these numbers in order of size.
Start with the smallest number.

6.72×10^5 67.2×10^{-4} 672×10^4 $0.000\,672$

.....

(Total for Question 28 is 2 marks)

6 Liz is watching a film at the cinema.

The film started at 14 30
The film is 105 minutes long.

When the film ends, Liz takes 20 minutes to get to the bus stop.

A bus leaves the bus stop at 16 45

Does Liz get to the bus stop in time to get this bus?
You must show all your working.

(Total for Question 6 is 3 marks)

13 A machine fills bags with sweets.

There are 4275 sweets.
There are 28 sweets in each full bag.

The machine fills as many bags as possible.

How many sweets are left?

.....

(Total for Question 13 is 3 marks)

Question 443

2 Work out $\frac{1}{3}$ of 24

.....

(Total for Question 2 is 1 mark)

4 Work out 2.5^2

.....

(Total for Question 4 is 1 mark)

5 Write the following numbers in order of size.
Start with the smallest number.

$$1 \qquad -4 \qquad 0 \qquad 7 \qquad -6 \qquad -3 \qquad 2$$

.....

(Total for Question 5 is 1 mark)

8 Karim buys 200 tiles.

The tiles are sold in boxes.
There are 25 tiles in each box.
Each box of tiles costs £9.75

Work out the total cost of the boxes of tiles Karim buys.

£ .....

(Total for Question 8 is 3 marks)

9 (a) Work out the value of $\frac{300}{2 \times 5}$

.....

(1)

(b) Work out the value of $(6 - 2.5)(8 + 4)$

.....

(1)

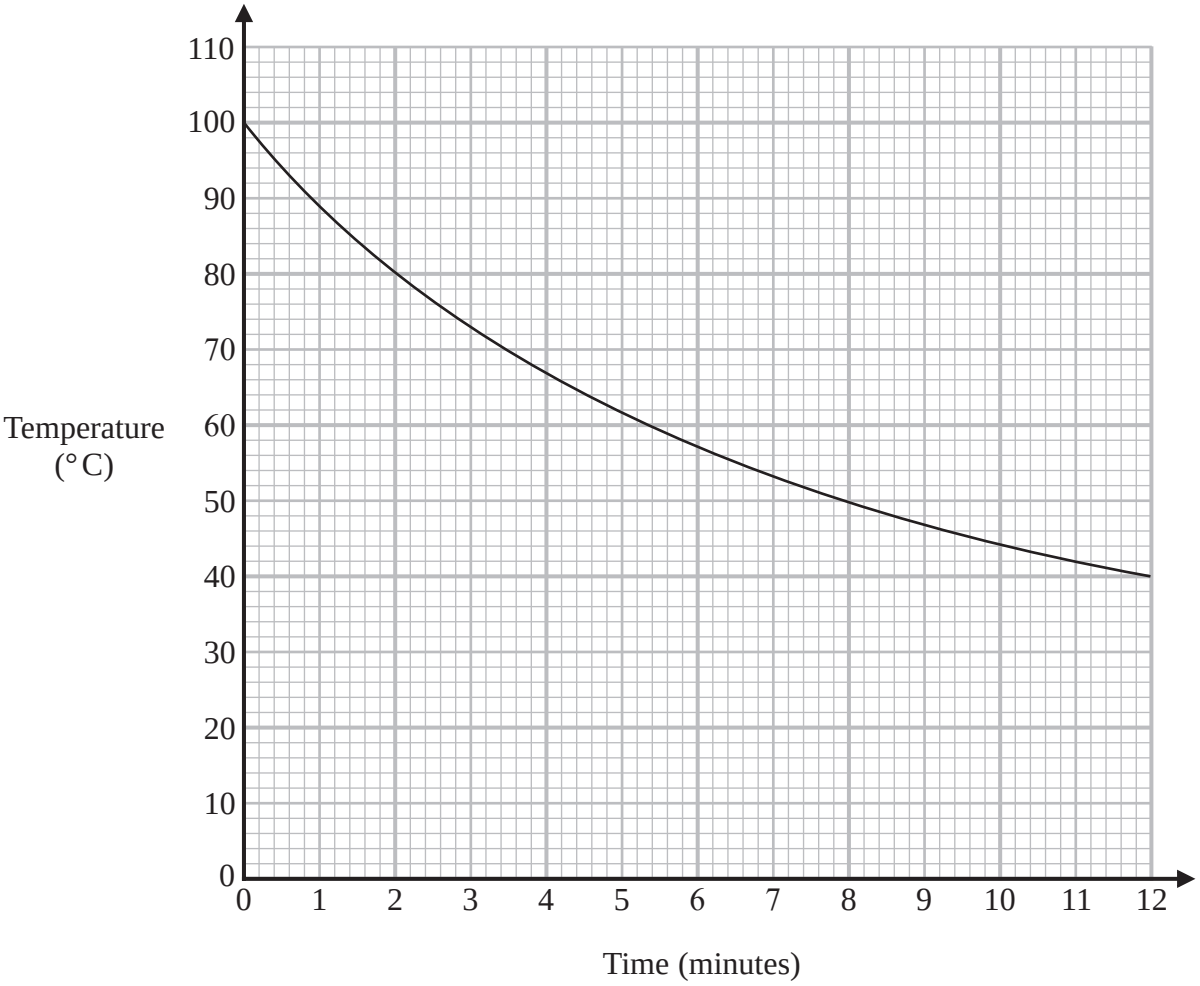
(c) Write down the reciprocal of 20

.....

(1)

(Total for Question 9 is 3 marks)

10 The graph shows information about the time, in minutes, a liquid has been cooling and the temperature of the liquid in °C.



(a) What is the temperature of the liquid at time 2 minutes?

..... °C

(1)

Pam recorded the time when the liquid had a temperature of 50° C.

(b) Write down this time.

..... minutes

(1)

Pam says that the temperature of the liquid drops more in the first 3 minutes of cooling than it does between time 9 minutes and time 12 minutes.

(c) Is Pam correct?
Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 10 is 3 marks)

15 Here are the costs of the same type of batteries in two shops.

Shop **A**	Shop **B**
Pack of 4 batteries £1.60	Pack of 6 batteries £2.70

Harry needs to buy at least 30 batteries.
He assumes that he has to buy batteries in whole packs.
Harry wants to buy the batteries as cheaply as possible from the same shop.

(a) Which shop should he buy the batteries from, shop **A** or shop **B**?
You must show all your working.

(4)

Harry's assumption is wrong.
He can buy single batteries for 40p each in shop **A** and for 45p each in shop **B**.

(b) Does this affect which of these two shops Harry should buy the batteries from?
Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 15 is 5 marks)

2 Write the following numbers in order of size.
Start with the smallest number.

8 –7 –10 1 0 –2

.....

(Total for Question 2 is 1 mark)

Question 451

November 2021 | 1MA1/1F | Original Q5

5 Write down the value of 7^2

.....

(Total for Question 5 is 1 mark)

Question 452

7 £42 is shared equally between 3 friends.

How much does each friend get?

£.....

(Total for Question 7 is 2 marks)

Question 453

9 Danny buys,

1 loaf of bread for £1.20
1 bottle of milk for 70p
2 packets of cheese for £2.30 each packet

Danny pays with a £10 note.

He says,

"I should get £3.30 change."

Is Danny correct?
You must show how you get your answer.

(Total for Question 9 is 3 marks)

10 Rachel records the temperature in her garden at noon each day.

On Monday, the temperature was 5 °C.
On Tuesday, the temperature was 10 ° less than the temperature on Monday.
On Wednesday, the temperature was 3° greater than the temperature on Tuesday.

Find the difference between the temperature on Monday and the temperature on Wednesday.
You must show all your working.

..... °C

(Total for Question 10 is 2 marks)

14 3 kg of carrots cost £1.80
2 kg of carrots and 5 kg of potatoes cost a total of £3.45

Work out the total cost of 4 kg of carrots and 2 kg of potatoes.
You must show all your working.

£.....

(Total for Question 14 is 4 marks)

20 (a) Work out 3.67×4.2

.....

(3)

(b) Work out $59.84 \div 1.6$

.....

(3)

(Total for Question 20 is 6 marks)

3 Write the following numbers in order of size.
Start with the smallest number.

1.02 0.12 1.20 0.21

.....

(Total for Question 3 is 1 mark)

7 A baker has three bags of flour, **A**, **B** and **C**.

Bag **A** and bag **B** contain the same amount of flour.
Bag **C** contains 940 g of flour.

In the three bags, there is a total of 2500 g of flour.

Work out the amount of flour in bag **A**.

..... g

(Total for Question 7 is 3 marks)

9 Alec needs to work out the value of $2 + 3 \times 4$

He writes

$$2 + 3 = 5 \text{ and } 5 \times 4 = 20, \text{ so } 2 + 3 \times 4 = 20$$

Alec is wrong.
Explain why.

.....

.....

.....

(Total for Question 9 is 1 mark)

15 Write the following fractions in order of size.
Start with the smallest fraction.

$$\frac{5}{8} \qquad \frac{2}{3} \qquad \frac{4}{9} \qquad \frac{3}{5}$$

.....

(Total for Question 15 is 2 marks)

18 The incomplete table gives some information about the lengths of the planks of wood in Ben's workshop.

Length of plank (metres)	Number of planks
3	5
2.5	8
2	
1.5	14
1	10

The total length of these planks is 92 metres.

Work out the number of planks of length 2 metres in Ben's workshop.

.....

(Total for Question 18 is 3 marks)

19 Rachel, Samina and Tom share £600 between them.

Rachel gets $\frac{2}{5}$ of the £600

Samina gets $\frac{1}{4}$ of the money that is left over.

Tom gets the rest of the money.

Tom says,
"I would have got more money if we had shared the £600 equally between us."

Is Tom correct?
You must show how you get your answer.

(Total for Question 19 is 4 marks)

3 What is the time 2 hours 40 minutes after 8.05 am?

..... am

(Total for Question 3 is 1 mark)

Question 464

4 Work out $\frac{1}{6}$ of 66

.....

(Total for Question 4 is 1 mark)

8 On Monday, Sandy pays for 2 plane tickets, 7 nights in a hotel and 2 theme park tickets.

	dollars
each plane ticket	600
each night in a hotel	120
each theme park ticket	250

Show that Sandy pays more than 2500 dollars on Monday.

(Total for Question 8 is 3 marks)

10 Corina has £300 to spend on books.
Each book costs £4.85

Work out the greatest number of books Corina can buy.

.....

(Total for Question 10 is 3 marks)

14 A stadium cost £600 million.

$\frac{13}{15}$ of this cost was for the building.
The rest of the cost was for the land.

Work out the cost of the land.

£..... million

(Total for Question 14 is 3 marks)

18 Change $1\,m^2$ into cm^2

..... cm^2

(Total for Question 18 is 1 mark)

22 Natalie makes potato cakes in a restaurant.

She mixes potato, cheese and onion so that

$$\text{weight of potato} : \text{weight of cheese} : \text{weight of onion} = 9 : 2 : 1$$

Natalie needs to make 6000 g of potato cakes.

Cheese costs £2.25 for 175 g.

Work out the cost of the cheese needed to make 6000 g of potato cakes.

£.....

(Total for Question 22 is 4 marks)

Question 470

4 Write down the value of the 6 in the number 16 007

.....

(Total for Question 4 is 1 mark)

5 Write these numbers in order of size.
Start with the smallest number.

$\frac{1}{2}$ 0.55 45%

.....

(Total for Question 5 is 1 mark)

7 Simon buys some candles.
Each candle costs £2

Simon pays with a £20 note.
He gets £6 change.

Work out the number of candles Simon buys.

.....

(Total for Question 7 is 3 marks)

10 In Norway last year, the lowest temperature was −15°C.
In Norway last year, the highest temperature was 42°C greater than the lowest temperature.

Work out the highest temperature in Norway last year.

.....°C

(Total for Question 10 is 2 marks)

Question 474

11 At the end of October, Fiona's electricity meter reads 88 738 kWh.
At the end of November, her electricity meter reads 89 198 kWh.

Each kWh of electricity Fiona uses costs 16p

Work out how much Fiona had to pay for the electricity she used in November.

.....

(Total for Question 11 is 4 marks)

6 Write the following numbers in order of size.
Start with the smallest number.

−11 −2 8 −7 3 10

.....

(Total for Question 6 is 1 mark)

10 Sonia wants to book a holiday.
The holiday will cost £1428

Sonia will pay a deposit of £150
She will then pay the rest of the cost in 6 equal monthly payments.

How much is each monthly payment?

£.....

(Total for Question 10 is 3 marks)

14 The box below contains three mathematical symbols.

=	<	>

From the box, choose a symbol to make each of the following statements correct.

(i) $\frac{5}{8}$ ..... $\frac{2}{8}$

(1)

(ii) -2×-3 ..... $-3 + 9$

(1)

(Total for Question 14 is 2 marks)

Question 478

2 Work out $\frac{1}{4}$ of 28

.....

(Total for Question 2 is 1 mark)

7 The table shows the total number of apples sold and the total number of oranges sold in a shop in each of three weeks.

	Week 1	**Week 2**	**Week 3**
Number of apples	86	75	92
Number of oranges	68	80	76

In total for the three weeks, more apples than oranges were sold.
How many more?

.....

(Total for Question 7 is 3 marks)

11 Sinita wants to make 35 picture frames.
She needs 4 nails for each frame.

Sinita has 3 boxes of nails.
There are 48 nails in each box.

Has Sinita got enough nails to make all 35 frames?
Show how you get your answer.

(Total for Question 11 is 3 marks)

Question 481

June 2022 | 1MA1/3F | Original Q15

15 Work out $\dfrac{2.75 \times 14.6}{10 - 1.97}$

.....

(Total for Question 15 is 2 marks)

2 Work out 3^2

.....

(Total for Question 2 is 1 mark)

3 Work out $20 \div (3 + 2)$

.....

(Total for Question 3 is 1 mark)

6 Fay is planning a trip to a theme park for 1 adult and 2 children.

These are the costs for the trip.

Total cost of petrol	£23
Tickets to theme park	£33 each adult £24.50 each child
Meals	£15 each adult £10 each child

Fay has £200 to spend.
She pays all the costs.

How much money does she have left?

£.....

(Total for Question 6 is 4 marks)

10 A shop sells jars of coffee.
Each jar of coffee costs £4

Michael has £23

(a) Work out the greatest number of jars of coffee Michael can buy.

.....

(2)

In a sale on Wednesday, jars of coffee are sold at half price.

Michael thinks that he can now buy exactly twice the number of jars of coffee for £23

(b) Is Michael correct?
You must give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 10 is 3 marks)

22 Work out 0.004×0.32

.....

(Total for Question 22 is 2 marks)

Question 487

1 Write the following numbers in order of size.
Start with the smallest number.

−7 7 0 −2 −1

.....

(Total for Question 1 is 1 mark)

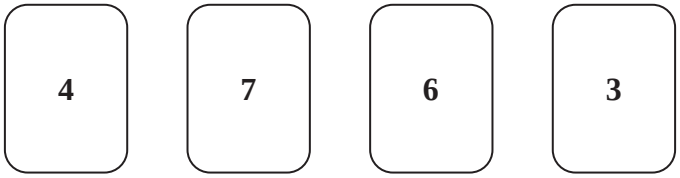
Question 488

3 Write down the 7th odd number.

.....

(Total for Question 3 is 1 mark)

5 Here are four cards.
There is a number on each card.



Write down the smallest 4-digit even number that can be made using each card only once.

.....

(Total for Question 5 is 1 mark)

8 Safiya wants to hire a van.
She uses this rule to work out the cost of hiring a van for a number of days.

Cost = £45 × number of days

Safiya is going to hire the van for 7 days.

Work out the cost.

£.....

(Total for Question 8 is 2 marks)

10 Here is part of a bus timetable between Wigan and Bolton.

Wigan	07 20		07 40		07 55
Blackrod	07 49		08 09		08 24
Horwich	08 00	08 14	08 20	08 29	08 36
Lostock	08 09	08 20	08 29	08 37	08 44
Park Road	08 14	08 34	08 41	08 48	08 58
Bolton	08 32	08 51	08 58	09 05	09 15

(a) How many minutes should the 07 20 bus take to go from Wigan to Lostock?

..... minutes
(2)

Alison goes from Blackrod to Bolton by bus.

One day Alison leaves her house at 08 00
She takes 7 minutes to walk to the bus stop in Blackrod.
She takes 15 minutes to walk from the bus stop in Bolton to work.

Alison needs to be at work for 09 20

(b) Will Alison get to work for 09 20?
You must show how you get your answer.

(3)

(Total for Question 10 is 5 marks)

12 (a) Work out $\frac{5}{8}$ of 132

.....

(2)

(b) Write the following fractions in order of size.
Start with the smallest fraction.

$\frac{3}{8}$ $\frac{9}{32}$ $\frac{1}{4}$ $\frac{21}{64}$

.....

(2)

(Total for Question 12 is 4 marks)

16 Water flows through each of the pipes that fill a lake at the same rate.
It takes 4 of the pipes 12 hours to fill the lake.

Work out how many hours it would take 6 pipes to fill $\frac{1}{4}$ of the lake.

..... hours

(Total for Question 16 is 3 marks)

25 (a) Find the value of the reciprocal of 0.8

.....

(1)

$x = 4700$ correct to 2 significant figures.

(b) Complete the error interval for x.

..... $\leqslant x <$ .....

(2)

(Total for Question 25 is 3 marks)

Question 495

1 Write the following numbers in order of size.
Start with the smallest number.

0.41 0.5 0.46 0.408

.....

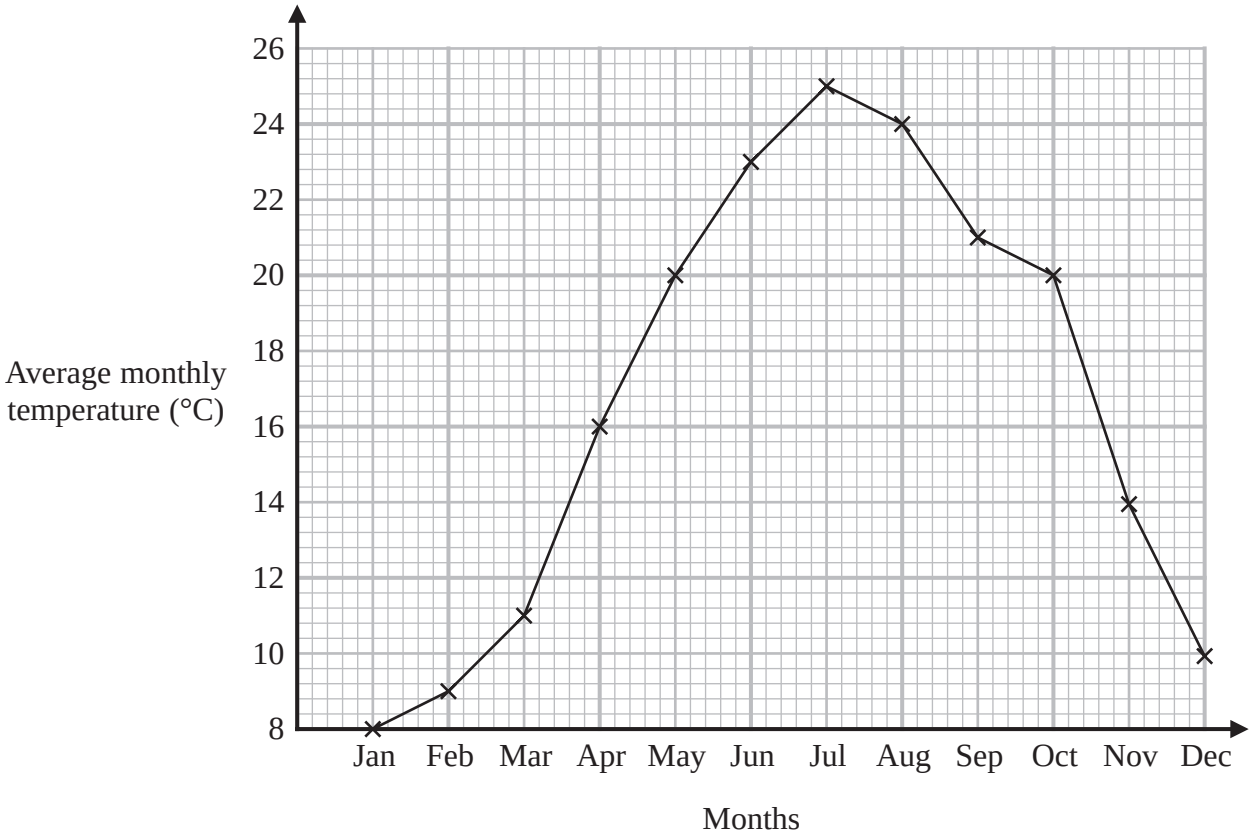
(Total for Question 1 is 1 mark)

2 Write down the value of the 2 in the number 12 345

.....

(Total for Question 2 is 1 mark)

6 The graph shows information about the average monthly temperature, in °C, in Amman.



(a) For how many months was the average monthly temperature greater than 16°C?

.....

(1)

(b) Write down the two months that had the same average monthly temperature.

..... and .....

(1)

(Total for Question 6 is 2 marks)

7 208 bars of chocolate were sold from a shop.

$\frac{1}{4}$ of these bars of chocolate were large bars.
The rest of the bars of chocolate were small bars.

All the large bars of chocolate were sold for £1 each.
All the small bars of chocolate were sold for 60p each.

Work out the total amount of money for which the 208 bars of chocolate were sold.
Give your answer in pounds.

£.....

(Total for Question 7 is 3 marks)

15 2.5 kg of onions and 2 kg of carrots cost a total of £2.36
3 kg of carrots cost £1.74

Stuart has £2
He wants to buy 4 kg of onions.

Does Stuart have enough money to buy 4 kg of onions?
You must show how you get your answer.

(Total for Question 15 is 5 marks)

3 Here is a list of numbers.

1.6 1.4 2.1 0.5 1.3

From the list, write down the smallest number.

.....

(Total for Question 3 is 1 mark)

Question 501

4 Work out $-9 + 5$

.....

(Total for Question 4 is 1 mark)

10 Max sees this special offer in a shop.

> Buy one large plate and get one small plate for half the normal price.

The normal price of a large plate is £2
The normal price of a small plate is 80p

Max wants to buy 6 large plates and 6 small plates using this offer.
He has £15

Has Max got enough money?
You must show how you get your answer.

(Total for Question 10 is 4 marks)

Question 503

20 Work out $8.46 \div 0.15$

.....

(Total for Question 20 is 3 marks)

Question 504

June 2023 | 1MA1/1F | Original Q29

29 Work out the value of $\dfrac{4^{-6} \times 4^{9}}{4}$

.....

(Total for Question 29 is 2 marks)

11 The table shows information about the weights of the people in a hotel lift.

Weight	Number of people
40 kg	1
50 kg	2
60 kg	4
70 kg	5
80 kg	3
90 kg	1

Show that the total weight of the people in the lift is less than 1200 kg.

(Total for Question 11 is 3 marks)

Question 506

13 There are 50 teachers in a school.

This is $\frac{1}{16}$ of the total number of people in the school.

Work out the total number of people in the school.

.....

(Total for Question 13 is 2 marks)

20 (a) Work out the value of $\dfrac{25 - \sqrt{43.87}}{6 + 2.1^2}$

Write down all the figures on your calculator display.

.....

(2)

(b) Work out the value of the reciprocal of 0.625

.....

(1)

(Total for Question 20 is 3 marks)

Question 508

1 Write the number three thousand one hundred and seven in figures.

.....

(Total for Question 1 is 1 mark)

5 7 –5 3 9 –2

Write these numbers in order of size.
Start with the smallest number.

.....

(Total for Question 5 is 1 mark)

10 Wayne begins walking at 8 30 am.
He walks for 1 hour and 45 minutes.

Wayne then rests for 15 minutes.
He then walks for 85 minutes to a cafe.

Does Wayne get to the cafe before 12 noon?
You must show how you get your answer.

(Total for Question 10 is 4 marks)

Question 511

15 There are only red beads and green beads in a bag.

number of red beads : number of green beads = 1 : 4

There are 35 red beads in the bag.

Work out the total number of beads in the bag.

.....

(Total for Question 15 is 2 marks)

23 It takes 14 hours for 5 identical pumps to fill a water tank.

How many hours would it take 4 of these pumps to fill another water tank of the same size?

..... hours

(Total for Question 23 is 2 marks)

28 (a) Write $(9 \times 10^4) : (4.5 \times 10^6)$ in the form $1 : n$ where n is an integer.

.....

(2)

(b) Write the following numbers in order of size.
Start with the smallest number.

5.625×10^4 5625 $56\,250 \times 10^{-3}$ $0.005\,625 \times 10^5$

.....

(2)

(Total for Question 28 is 4 marks)

2 Work out $120 - 89$

.....

(Total for Question 2 is 1 mark)

Question 515

5 Work out $\frac{1}{5}$ of 300

.....

(Total for Question 5 is 1 mark)

6 There are 3 litres of oil in a can.
Jermaine uses 700 millilitres of the oil.

Work out the amount of oil left in the can.
Give your answer in millilitres.

..... millilitres

(Total for Question 6 is 3 marks)

13 Chloe is making scrunchies.

Chloe has a large number of hair bands.
Each hair band costs 8p.

She buys 100 g of wool for £3

Chloe uses 1 hair band and 5 g of wool to make each scrunchy.
She makes as many scrunchies as she can.

Work out the total cost of each scrunchy that she makes.
Give your answer in pence.

.....p

(Total for Question 13 is 4 marks)

18 Work out 6.3×2.4

.....

(Total for Question 18 is 3 marks)

19 (a) (i) Write down the value of 5^0

.....

(1)

(ii) Write down the value of 5^{-2}

.....

(1)

(b) Write $\frac{2^5 \times 2^4}{2^3}$ in the form 2^n where n is an integer.

.....

(2)

(Total for Question 19 is 4 marks)

8 Curtis needs to buy some items for his sports club.

Here are the prices.

Item	Price
Footballs	£9.50 each
Hockey sticks	£30 for 2
Cricket bats	£23 each
Tennis balls	£5 for 4

Curtis needs to buy

5 footballs
6 hockey sticks
2 cricket bats
4 tennis balls.

Curtis has £200 to spend.

Show that Curtis can buy all the items he needs.

(Total for Question 8 is 4 marks)

14 3 kg of flour costs £4.05
5 kg of flour and 6 kg of sugar cost £11.85

Work out the cost of 2 kg of flour and 5 kg of sugar.

£.....

(Total for Question 14 is 4 marks)

3 Write down a number that is less than –5

.....

(Total for Question 3 is 1 mark)

Question 523

5 Write down the value of the 9 in the number 27.963

.....

(Total for Question 5 is 1 mark)

Question 524

7 Miklos is swimming lengths of a swimming pool.
Each length of the pool is 25 m.

Miklos has swum 178 lengths of the pool.
He wants to swim a total distance of 8050 m.

Calculate how many more lengths Miklos needs to swim.

.....

(Total for Question 7 is 3 marks)

9 Mandy buys a 12 kilogram bag of dog food.

Mandy's dog has 3 meals a day.
She gives her dog 105 grams of dog food for each of these meals.

How many complete weeks will the bag of dog food last?
You must show all your working.

.....

(Total for Question 9 is 5 marks)

Question 526

12 A chess match lasted $3\frac{1}{4}$ hours.

The match finished at 14 10

At what time did the chess match start?

.....

(Total for Question 12 is 2 marks)

Question 527

14 Write the following numbers in order of size.
Start with the smallest number.

$\frac{7}{12}$ 0.56 57% $\frac{6}{11}$ 0.558

.....

(Total for Question 14 is 2 marks)

22 Seija works at a weather station.
The table gives information about the temperature, T °C, at midday for each of 50 cities in the UK on Tuesday.

Temperature (T °C)	Frequency
$10 < T \leqslant 15$	2
$15 < T \leqslant 20$	8
$20 < T \leqslant 25$	13
$25 < T \leqslant 30$	21
$30 < T \leqslant 35$	6

(a) Calculate an estimate for the mean temperature.

.....°C
(3)

Seija says,

> "The median temperature is 22.5 °C because 22.5 is the middle number in the middle group."

(b) Is Seija correct?
Give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 22 is 4 marks)

24 Ali buys packs of balloons and boxes of pencils.

There are 30 balloons in each pack.
There are 24 pencils in each box.

Ali buys exactly the same number of balloons and pencils.

Work out how many packs of balloons and how many boxes of pencils she could have bought.
You must show all your working.

..... packs of balloons

..... boxes of pencils

(Total for Question 24 is 3 marks)

Question 530

25 A company orders a large number of plates from a factory.

It would take 30 hours to make all the plates using 4 machines.

How many machines are needed to make all the plates in 6 hours?

.....

(Total for Question 25 is 2 marks)

4 Write these numbers in order of size.
Start with the smallest number.

0.21 0.2 0.03 0.1 0.16

.....

(Total for Question 4 is 1 mark)

6 Ryan buys

4 cakes at £1.30 each
2 identical tins of soup.

Ryan pays with a £10 note.
He gets £1.80 change.

How much does Ryan pay for each tin of soup?

£.....

(Total for Question 6 is 4 marks)

11 (a) Work out $-12 \div -4$

.....

(1)

(b) Find the value of 2^5

.....

(1)

(c) Write **one** pair of brackets in this calculation so that the answer is correct.

$$30 \div 3 + 2 - 4 = 2$$

(1)

(Total for Question 11 is 3 marks)

14 Work out 273×54

.....

(Total for Question 14 is 3 marks)

18 Write down the value of 10^0

.....

(Total for Question 18 is 1 mark)

21 (a) Work out $3\frac{4}{5} - 1\frac{2}{3}$

.....

(2)

Kevin was asked to work out $2\frac{1}{3} \times \frac{5}{8}$

Here is his working and his answer.

$$2\frac{1}{3} \times \frac{5}{8} = \frac{7}{3} \times \frac{5}{8}$$

$$= \frac{35}{24}$$

$$= 1\frac{9}{24}$$

Kevin's answer is wrong.

(b) What mistake has Kevin made?

.....

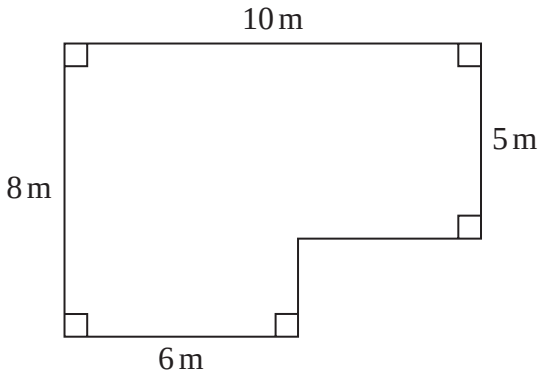
.....

.....

(1)

(Total for Question 21 is 3 marks)

22 The diagram shows a plan of a floor.



Petra is going to cover the floor with paint.

Petra has 3 tins of paint.
There are 2.5 litres of paint in each tin.

Petra thinks 1 litre of paint will cover $10\,m^2$ of floor.

(a) Assuming Petra is correct, does she have enough paint to cover the floor?
You must show all your working.

(4)

Actually, 1 litre of paint will cover $11\,m^2$ of floor.

(b) Does this affect your answer to part (a)?
You must give a reason for your answer.

.....

.....

.....

(1)

(Total for Question 22 is 5 marks)

Question 538

June 2024 | 1MA1/2F | Original Q1

1 Write the following numbers in order.
Start with the lowest number.

4 –3 7 2 –1

.....

(Total for Question 1 is 1 mark)

9 Anil has a job as a driver.
He is paid for each mile he drives.
He is also paid expenses.

One week Anil writes down the distance readings from his car.

Start of week:	4	7	2	4	1	miles
End of week:	4	7	8	7	9	miles

For this week, Anil is paid 47p for each mile he drives.
He is also paid expenses of £80

Work out the total amount that Anil is paid.
Give your answer in pounds.

£.....

(Total for Question 9 is 4 marks)

12 Saira buys 24 bars of chocolate.

$\frac{2}{3}$ of the 24 bars are white chocolate.

The rest of the 24 bars are milk chocolate.

Each milk chocolate bar has a weight of 35 grams.

Work out the total weight of the milk chocolate bars that Saira buys.

..... grams

(Total for Question 12 is 3 marks)

19 (a) Work out the value of $\dfrac{\sqrt{35.2 + 1.7^3}}{4.6^2 - 8.91}$

Write down all the numbers on your calculator display.

.....

(2)

(b) Write your answer to part (a) correct to 2 significant figures.

.....

(1)

(Total for Question 19 is 3 marks)

22 The number of hours, H, that some machines take to make 5000 bottles is given by

$$H = \frac{72}{n}$$ where n is the number of machines.

On Monday, 6 machines made 5000 bottles.
On Tuesday, 9 machines made 5000 bottles.

The machines took more time to make the bottles on Monday than on Tuesday.

How much more time?

..... hours

(Total for Question 22 is 2 marks)

3 Write down the value of the 3 in the number 62 837

.....

(Total for Question 3 is 1 mark)

5 Write the following fractions in order of size.
Start with the smallest fraction.

$\frac{1}{2}$ $\frac{2}{3}$ $\frac{1}{4}$

.....

(Total for Question 5 is 1 mark)

8 Aisha was born in 1993

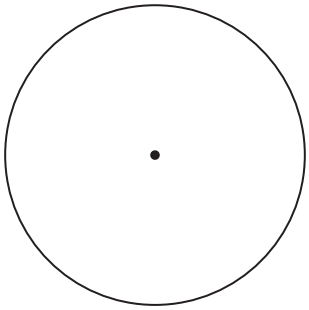
There was an election in the year of Aisha's 18th birthday.

There is an election every 5 years.

Will there be an election in 2030?
You must show how you get your answer.

(Total for Question 8 is 3 marks)

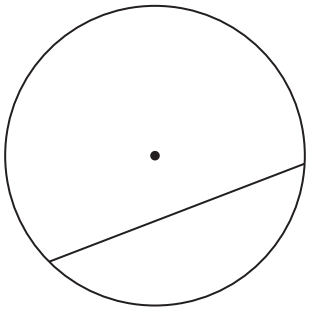
10 Here is a circle.



(a) On the diagram above, draw a radius of the circle.

(1)

Here is another circle.



(b) Write down the mathematical name for the straight line inside this circle.

.....

(1)

(Total for Question 10 is 2 marks)

Question 547

11 There are 8 episodes in a TV series.
Each episode lasts 45 minutes.

Work out the total time that the 8 episodes last.
Give your answer in hours.

..... hours

(Total for Question 11 is 2 marks)

Question 548

5 Work out 500 + 145

.....

(Total for Question 5 is 1 mark)

6 Javid hires a car for 10 days.
He pays £45 for each day.
He also pays £30 for insurance.

Javid pays with ten £50 notes.
Work out how much change he should get.

£.....

(Total for Question 6 is 3 marks)

12 Olly was asked to work out $5 - 3 \times 4$

Olly wrote $5 - 3 = 2$
He then worked out 2×4

Explain what is wrong with Olly's method.

.....

.....

.....

(Total for Question 12 is 1 mark)

16 1 cup of tea and 1 cup of coffee cost £4.50
3 cups of tea and 1 cup of coffee cost £8.50

Work out the total cost of 4 cups of tea and 3 cups of coffee.
You must show all your working.

£.....

(Total for Question 16 is 5 marks)

18 Work out $818.4 \div 1.2$

.....

(Total for Question 18 is 3 marks)

2 Write 140 minutes in hours and minutes.

..... hours ..... minutes

(Total for Question 2 is 1 mark)

3 Write these numbers in order of size.
Start with the smallest number.

0.57 0.507 0.5 0.05

.....

(Total for Question 3 is 1 mark)

5 Find the number that is exactly halfway between –2 and 8

.....

(Total for Question 5 is 1 mark)

6 Jo uses beads to make bracelets.
For each bracelet she uses 5 red beads and 7 white beads.

Jo has 52 red beads and 80 white beads.

Work out the greatest number of bracelets Jo can make.
You must show all your working.

.....

(Total for Question 6 is 3 marks)

20 Use your calculator to work out the value of

$$\sqrt{\frac{208.3 - 15.7}{5.694 + 1.8^2}}$$

Write down all the digits on your calculator display.

.....

(Total for Question 20 is 2 marks)

Question 558

1 Write down the value of the 7 in the number 3721

.....

(Total for Question 1 is 1 mark)

Question 559

2 Work out $\frac{1}{6}$ of 96

.....

(Total for Question 2 is 1 mark)

4 Write the following numbers in order.
Start with the lowest number.

$-3 \quad 4 \quad -7 \quad 6 \quad 0$

.....

(Total for Question 4 is 1 mark)

8 Nina orders some items from a DIY shop.
Here is her bill.

Item	Quantity	Cost of each item	Total
Pack of screws	4	£29.99	£119.96
Tin of paint	2	£24.95	£.....
Wooden plank	.....	£7.75	£232.50
		Delivery charge	£14.95
		Total cost	£.....

(a) Complete all the missing information in the bill.

(3)

At the beginning of January, Jeff had £892.48 in his bank account.

During January, Jeff

had £4.47 interest added to his account
paid £240 into his account
spent £365.50 from his account.

(b) How much money did Jeff have in his account at the end of January?

£.....

(3)

(Total for Question 8 is 6 marks)

10 Here is part of a train timetable between Horwich and Manchester.

Horwich	07 13	07 46	08 14	08 44	09 14
Lostock	07 16		08 17		09 17
Bolton	07 21	07 54	08 22	08 52	09 22
Salford	07 36	08 05	08 36	09 05	09 36
Manchester	07 47	08 15	08 45	09 15	09 45

(a) How long should the 07 46 train from Horwich take to get to Salford?

..... minutes

(1)

Barnie has a job interview in Manchester.

Barnie takes 6 minutes to walk from his home to the station in Lostock.
He will take 8 minutes to walk from the station in Manchester to his interview.

Barnie needs to be at the interview no later than 09 00

(b) (i) What is the latest time Barnie can leave his house and be on time for the interview?

.....

(3)

The time of Barnie's interview is changed.
Now he has to be at the interview no later than 09 15

(ii) What effect does the change of time have on the latest time Barnie can leave his house?

.....

.....

(1)

(Total for Question 10 is 5 marks)

Question 563

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11 (a) Work out $\frac{5}{8} - \frac{1}{4}$

.....

(2)

(b) Work out $\frac{2}{5}$ of 40

.....

(2)

(Total for Question 11 is 4 marks)

12 Here is part of a train timetable from Liverpool to Birmingham.

Liverpool	08 07	08 47	09 07
Runcorn	08 25	09 03	09 26
Crewe	08 53	09 22	09 55
Stafford	09 11	09 51	10 14
Wolverhampton	09 30	–	10 31
Birmingham	09 50	10 34	10 50

(a) Which train should take the least time to go from Liverpool to Crewe?
You must show how you get your answer.

(3)

Rose gets to the station in Wolverhampton at 09 25
She wants to catch the next train to Birmingham.

This train is delayed by 35 minutes.

(b) How many minutes does Rose have to wait for the train?

..... minutes

(2)

(Total for Question 12 is 5 marks)

Question 565

15 Work out 1.35×48

.....

(Total for Question 15 is 3 marks)

Question 566

1 Change 3 weeks into days.

..... days

(Total for Question 1 is 1 mark)

4 Here are some temperatures in °C.

–3 5 –6 7 2

Write the temperatures in order.
Start with the lowest temperature.

.....

(Total for Question 4 is 1 mark)

5 Write down a sensible metric unit that could be used to measure

(i) the height of a mountain

.....

(1)

(ii) the weight of a button.

.....

(1)

(Total for Question 5 is 2 marks)

6 Four numbers add up to 76

One of the numbers is 13
The other three numbers are each the same number.

Work out the value of each of the other three numbers.

.....

(Total for Question 6 is 3 marks)

Question 570

7 Here is a rule to work out the cost of buying a number of floorboards.

$$\text{Cost} = £55 \times \text{number of floorboards}$$

Toby buys a number of floorboards.
The cost is £330

Work out the number of floorboards Toby buys.

.....

(Total for Question 7 is 2 marks)

24 This year the total weight of potatoes grown on a farm is $\frac{1}{5}$ less than last year.

This year the total weight of potatoes grown is 8000 tonnes.

Work out the total weight of potatoes grown last year.

..... tonnes

(Total for Question 24 is 3 marks)

Question 572

1 Write down the value of the 7 in the number 49.715

.....

(Total for Question 1 is 1 mark)

6 Abi has some £10 notes and some £20 notes.
The notes have a total value of £400

Abi has six £20 notes.

Work out the number of £10 notes Abi has.

.....

(Total for Question 6 is 3 marks)

Question 574

11 Elena's height is 136 centimetres.
George's height is 1.2 metres.

Elena's height is greater than George's height.

How many centimetres greater?

..... centimetres

(Total for Question 11 is 2 marks)

16 A team plays 48 games.

The team wins $\frac{3}{8}$ of the 48 games.

The number of games the team loses is the same as the number of games the team draws.

Work out the number of games the team loses.

.....

(Total for Question 16 is 3 marks)