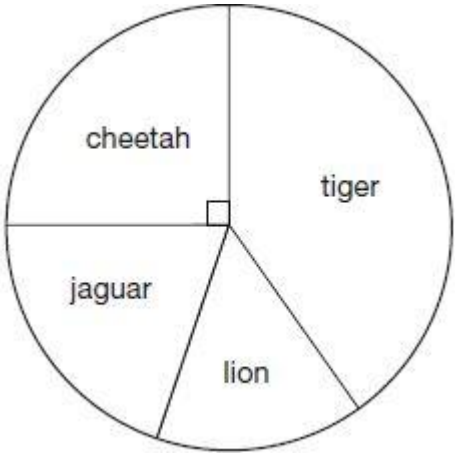
Q1.

This chart shows the number of different types of big cat in a zoo.

There are **20** big cats in the zoo altogether.



Here are some statements about the chart.

Tick the statements that are **true**.

There are more cheetahs than jaguars. ☐

The total number of lions and tigers is 10 ☐

One-quarter of the big cats are cheetahs. ☐

There are more than 5 jaguars. ☐

2 marks

Q2.

Here are the temperatures in four cities at midnight and at midday.

	Temperature	
City	**At midnight**	**At midday**
Paris	−4°C	−2°C
Oslo	−13°C	−7°C
Rome	3°C	10°C
Warsaw	−6°C	2°C

At **midnight**, how many degrees colder was Paris than Rome?

degrees

1 mark

Which city was 6 degrees colder at midnight than at midday?

_____

1 mark

Q3.

William wants to travel to Paris by train.

He needs to arrive in Paris by **5:30 pm**.

Circle the **latest time** that William can leave London.

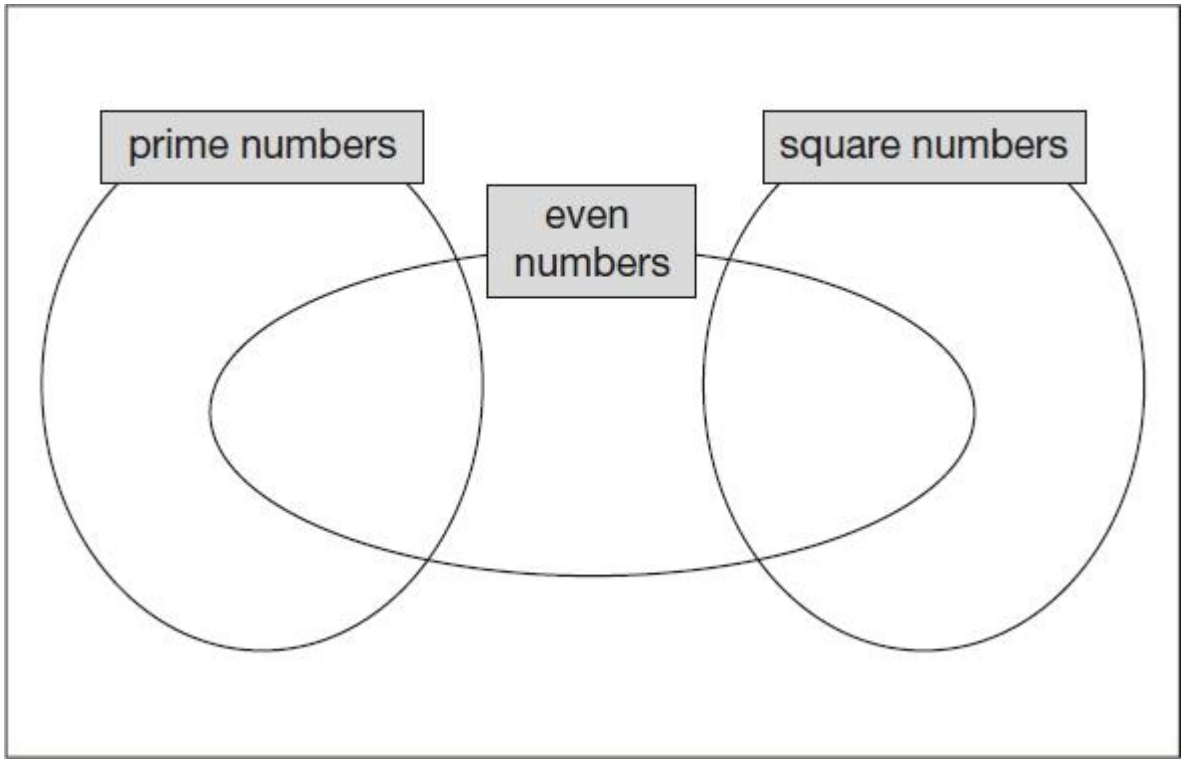
Leaves London	Arrives Paris
12:01	15:22
12:25	15:56
13:31	16:53
14:01	17:26
14:31	17:53
15:31	18:53
16:01	19:20

1 mark

Q4.

Write each number in its correct place on the diagram.

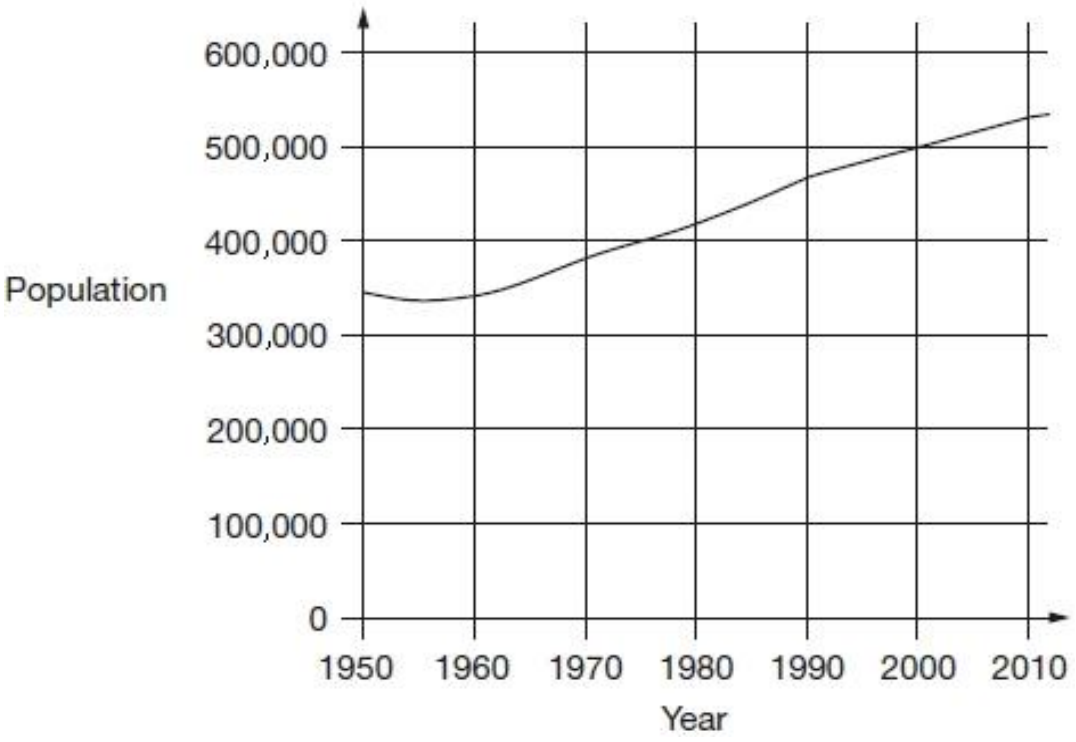
16 17 18 19



2 marks

Q5.

This chart shows the population of Cornwall from 1950 to 2010.



Look at the chart.

In which year did the population first reach 400,000?

1 mark

How much did the population increase from 1950 to 2000?

1 mark

What was the population of Cornwall in 2010?

1 mark

Q6.

Here is part of the morning bus timetable from Winton to Yansley.

Winton	9:35	9:55	10:15	10:35
Ingham	9:45	10:05	10:25	10:45
Carston	10:01	10:21	10:41	11:01
Dubley	10:23	10:43	11:03	11:23
Yansley	10:55	11:15	11:35	11:55

How many minutes does the bus take to get from Ingham to Dubley?

minutes

1 mark

Megan is in Carston.

She wants to be in Yansley before 11:30

What is the time of the latest bus she can take from Carston?

:

1 mark

One morning, the 10:35 bus from Winton gets to Carston 3 minutes early.

What time does it get to Carston?

:

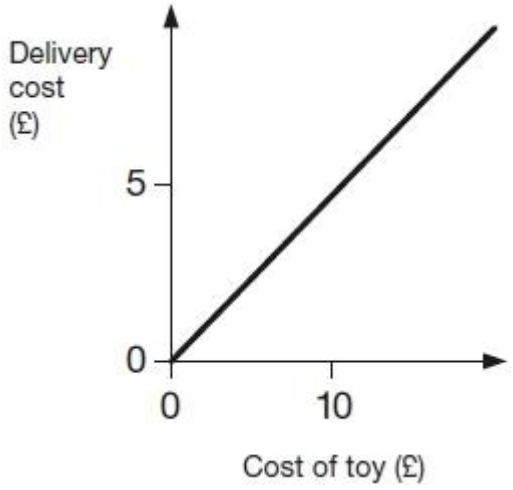
1 mark

Q7.

Two companies sell toys online. They charge to deliver.

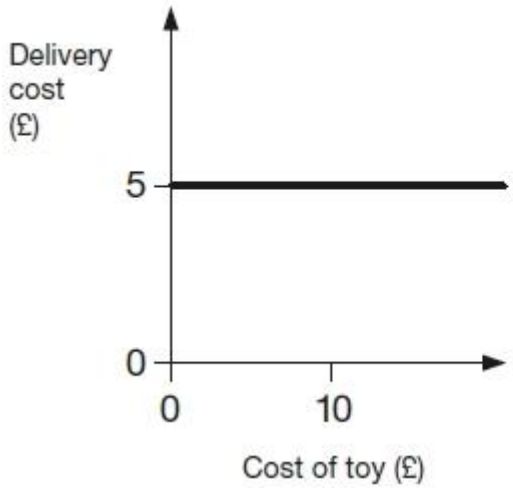
Describe the delivery cost of the second company.

The first company is done for you.



The more a toy costs, the more

the delivery costs.



1 mark

Q8.

This weather chart shows the highest and lowest temperatures in a town on five days in

March.

	Temperature °C	
	highest	lowest
Monday	+7	0
Tuesday	+7	–2
Wednesday	+8	–2
Thursday	+9	+1
Friday	+4	–5

Which day has the greatest difference between the highest and the lowest temperatures?

_____

1 mark

What is the difference between the lowest temperatures on Thursday and Friday?

degrees

1 mark

Q9.

Amy did a survey of what time people get up on a Sunday morning.
This table shows her results for 150 people.

Time	number of people
before 7 am	13
7:00 am to 7:59 am	28
8:00 am to 8:59 am	59
9:00 am to 9:59 am	36
10 am and after	14

Look at the table.

How many people get up at **8 am or later**?

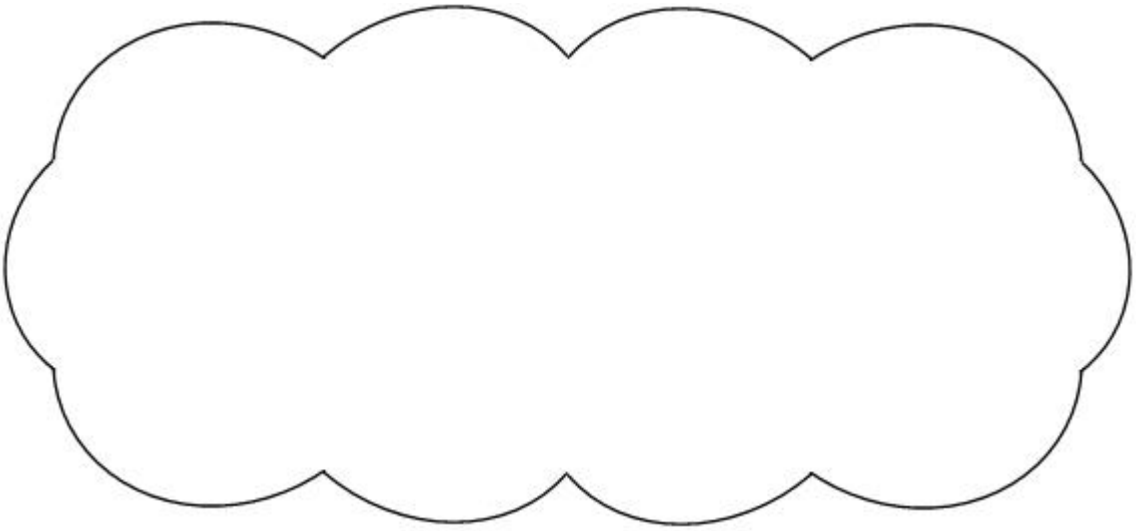
1 mark

Amy says,

'Two-thirds of the 150 people in the survey get up before 9 am.'

Amy is correct.

Explain how you know.



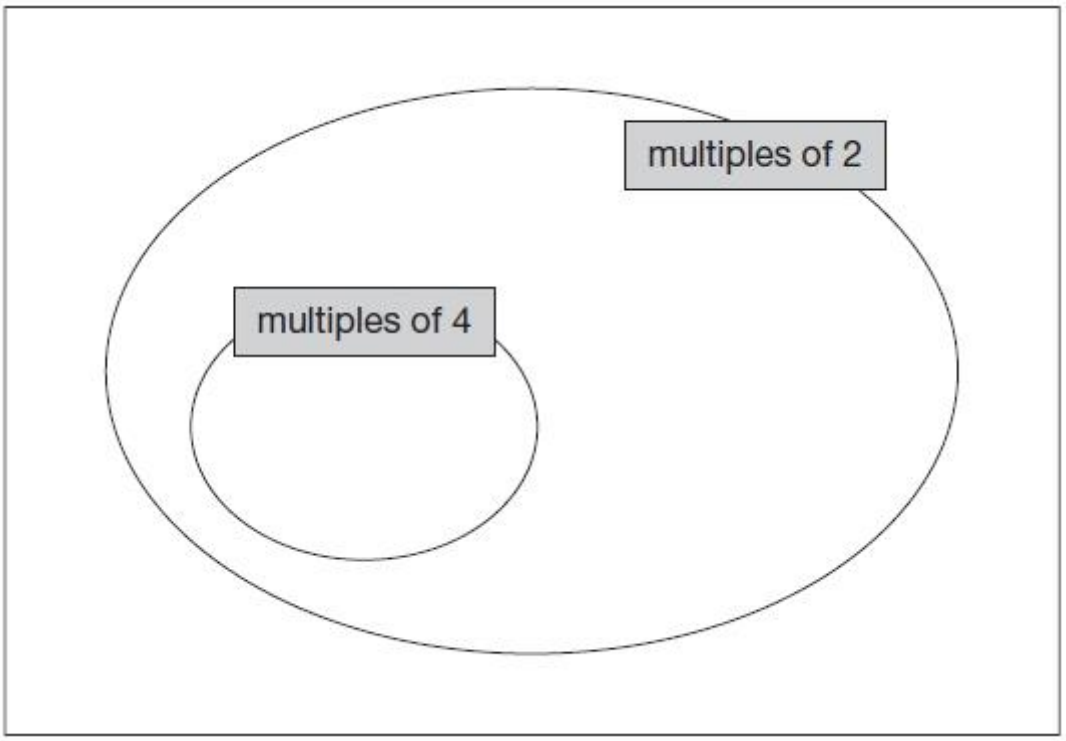
1 mark

Q10.

Here is a Venn diagram for sorting numbers.

Write each number in its correct place on the diagram.

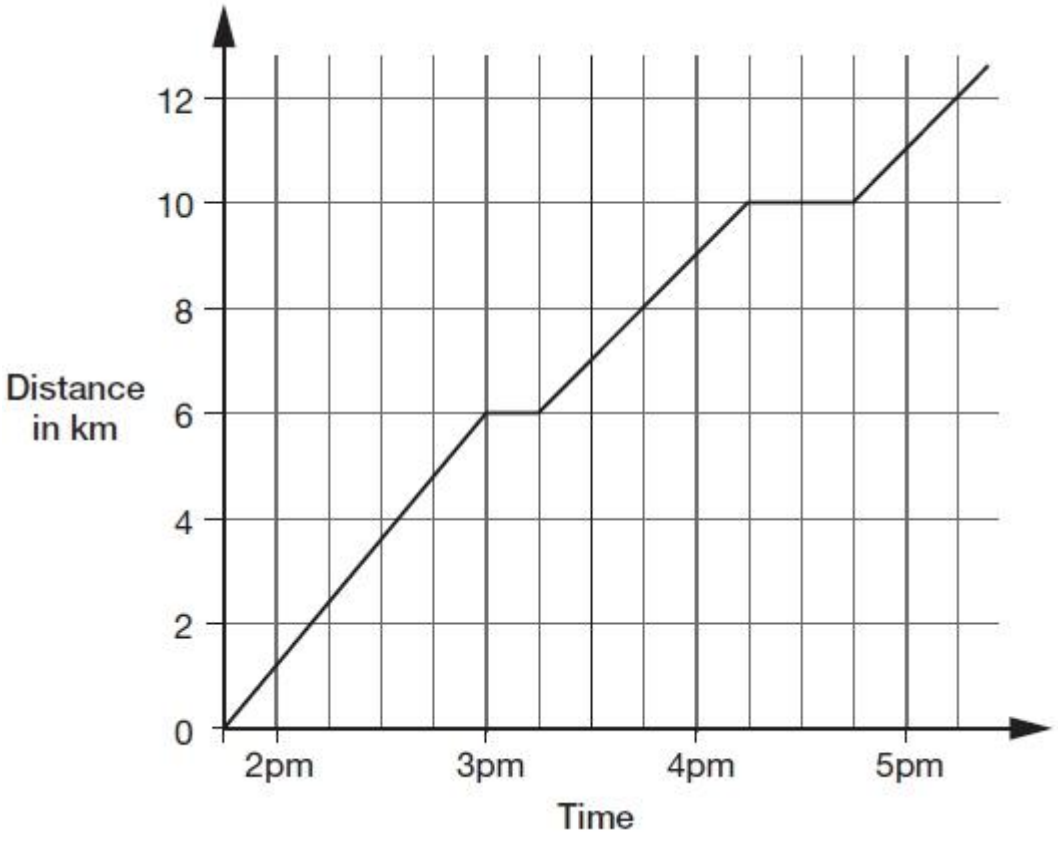
10 11 12 13



2 marks

Q11.

This graph shows the distance Alfie and Chen walked in an afternoon. They started at 1:45pm and had two breaks.



How many kilometres did they walk **between** the first and second breaks?

km

1 mark

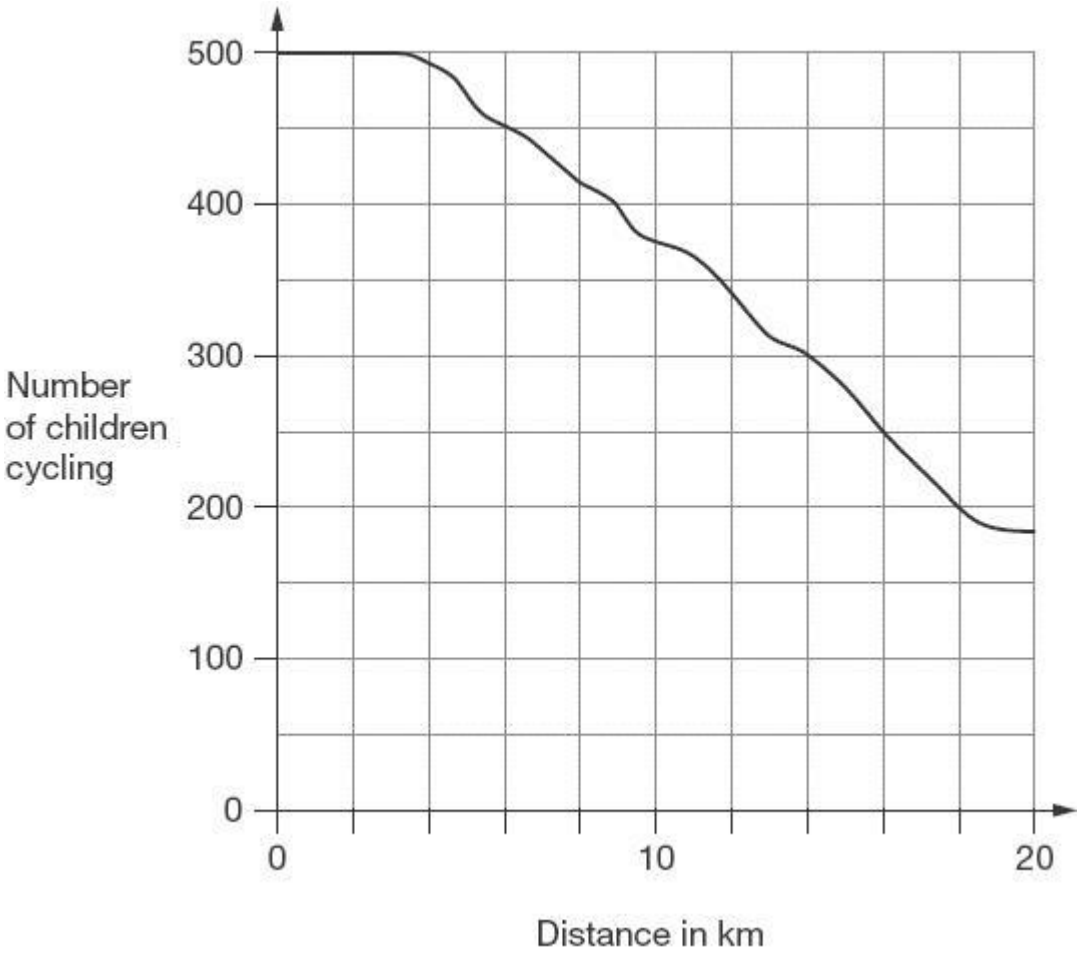
At what time did Alfie and Chen start their second break?

1 mark

Q12.

500 children started a 20 kilometre sponsored cycle ride.

This graph shows how far they cycled.



At what distance were exactly half of the children still cycling?

km

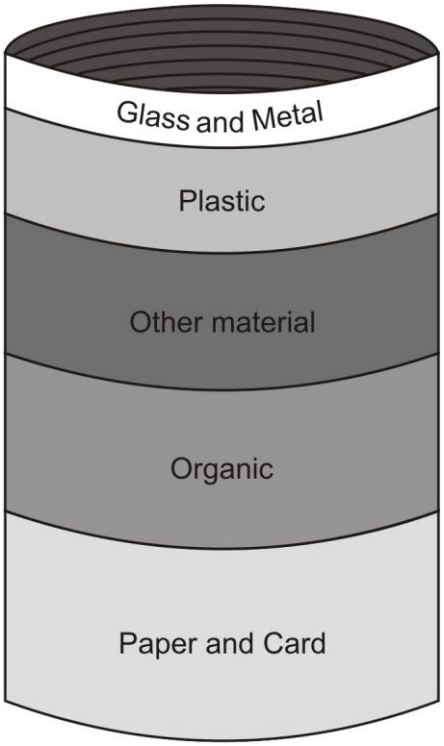
1 mark

Estimate how many children completed the 20 kilometre cycle ride.

1 mark

Q13.

This diagram shows the proportions of waste by weight a family throws away in one year,



Estimate what **fraction** of the waste is **organic**.

1 mark

The family throws away about **35 kilograms of plastic** in a year.

Use the diagram to estimate the weight of **glass and metal** they throw away.

kg

1 mark

The family throws away **130 kg** of paper and card.

70% of this is **newspapers**.

What is the weight of **newspapers**?

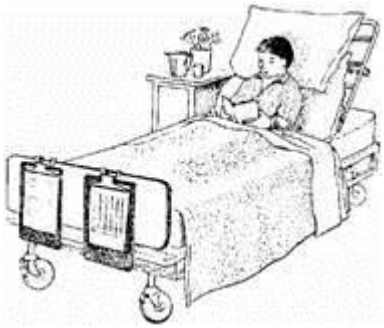
Show your method

kg

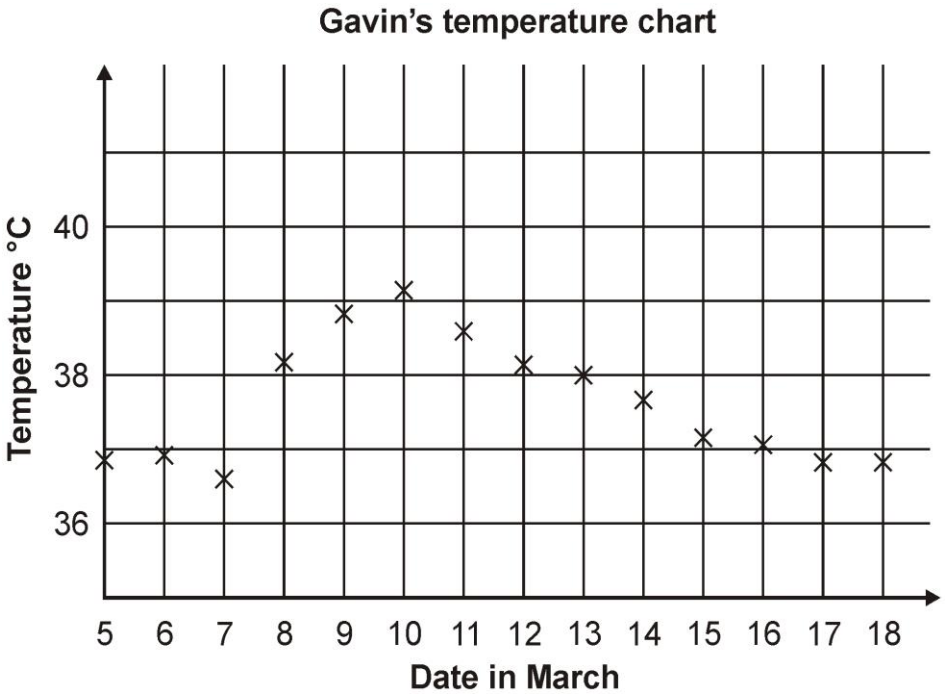
2 marks

Q14.

Gavin was ill in March.



This is his temperature chart.



For how many days was his temperature marked as **more than 37°C**?

1 mark

Which **date** showed the largest **change in temperature** from the day before?

1 mark

Estimate Gavin's **highest** temperature shown on the graph.

Give your answer to **1 decimal place.**

°C

1 mark

Q15.

This is what it costs to visit a castle.

Allington Castle Cost per person	
Adults	£2.45
Children (11 and over)	£1.30
Children (under 11)	95p

Helen is 10 years 9 months old.

How much will it cost Helen to visit?

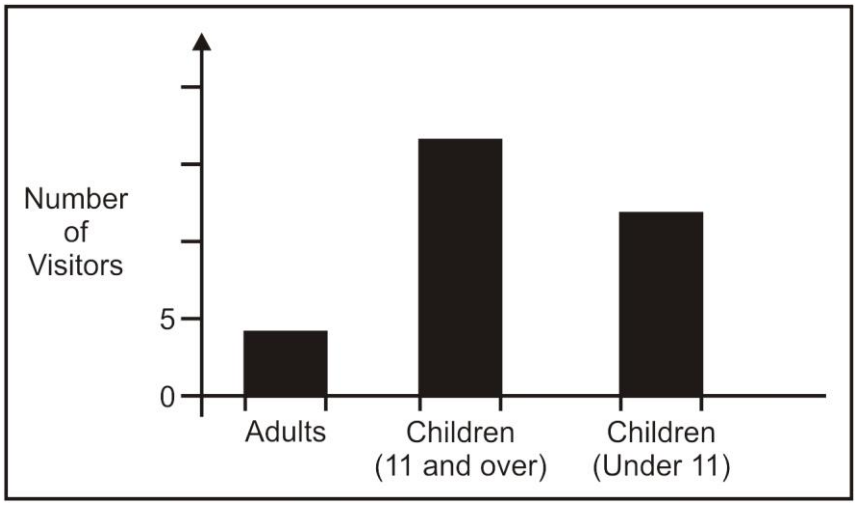
1 mark

On one day the number of visitors was

Adults	**4**
Children (11 and over)	**16**
Children (under 11)	**12**

Here is a graph to show the number of visitors.

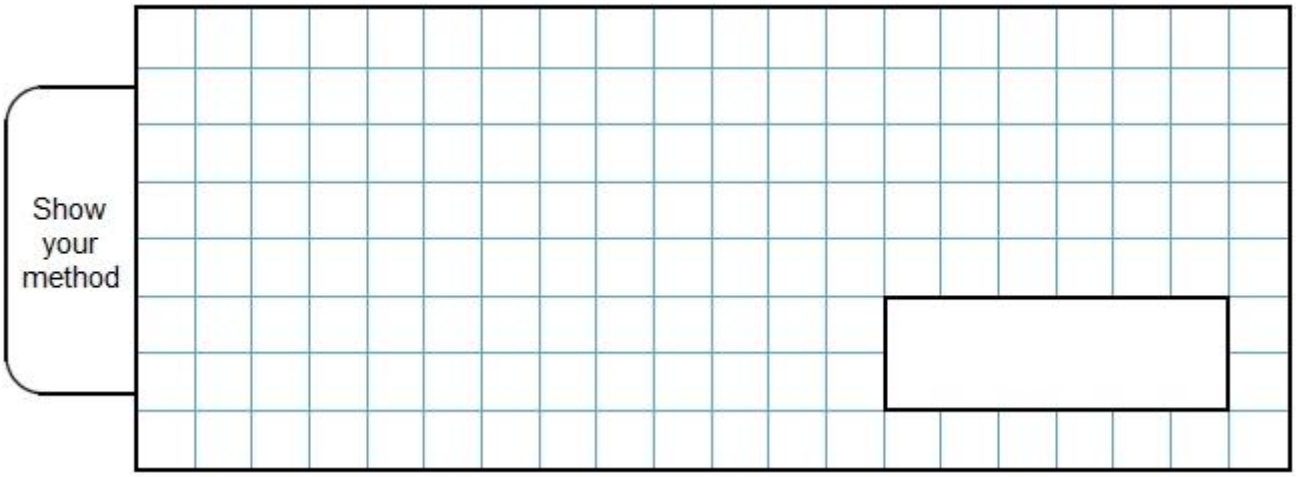
Complete the scale for the axis called “Number of Visitors”.



1 mark

How much will it cost for **18 children** (under 11) to visit the castle?

You **must** show your working.



1 mark

Q16.

This table shows the distances in **kilometres** between five towns.

	Birmingham	Cardiff	London	Manchester	Newcastle
Birmingham		179	188	127	334
Cardiff	179		269	278	489
London	*188*	*269*		*298*	*441*
Manchester	127	278	298		212
Newcastle	*334*	489	441	212	

Use the table to find the distance from **London** to **Manchester.**

km

1 mark

James goes from **Newcastle** to **Birmingham,** and then on to **Cardiff.**

How many **kilometres** does he travel?

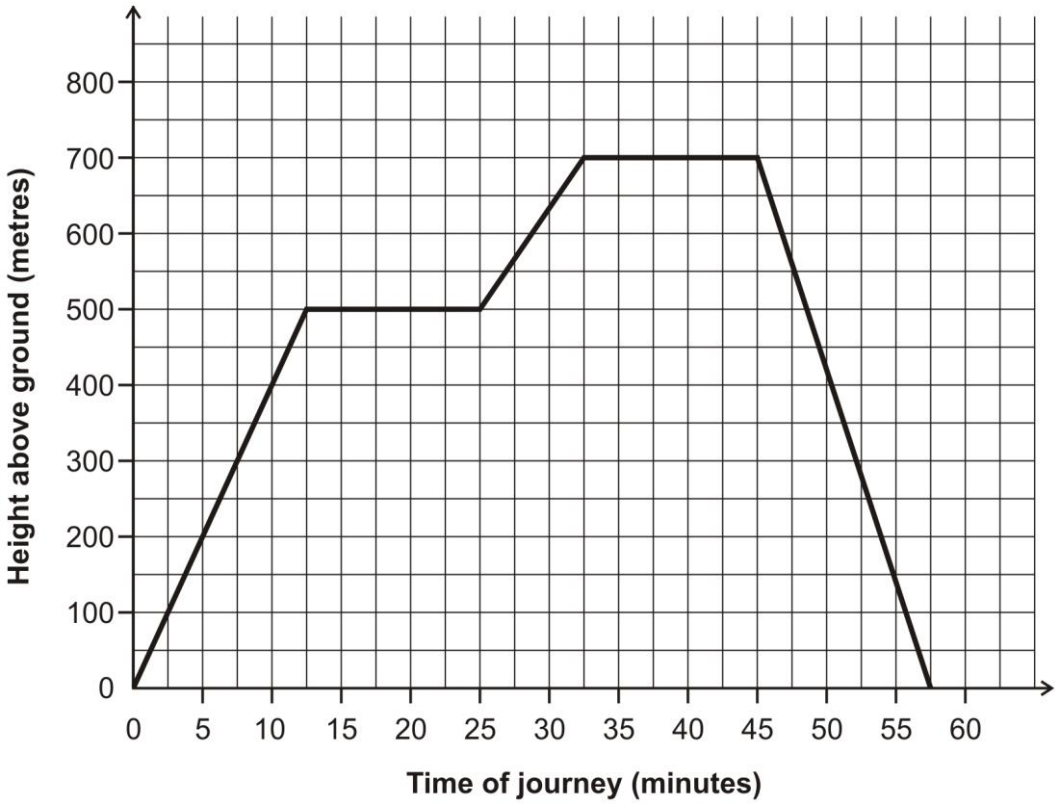
Show your method

km

2 marks

Q17.

The graph shows the journey of a hot-air balloon.



(a) At what **height** above the ground was the balloon after **10 minutes?**

metres

1 mark

(b) After how many **minutes** of the journey did the balloon begin to go down?

minutes

1 mark

Q18.

80 people were asked if they owned a pet.

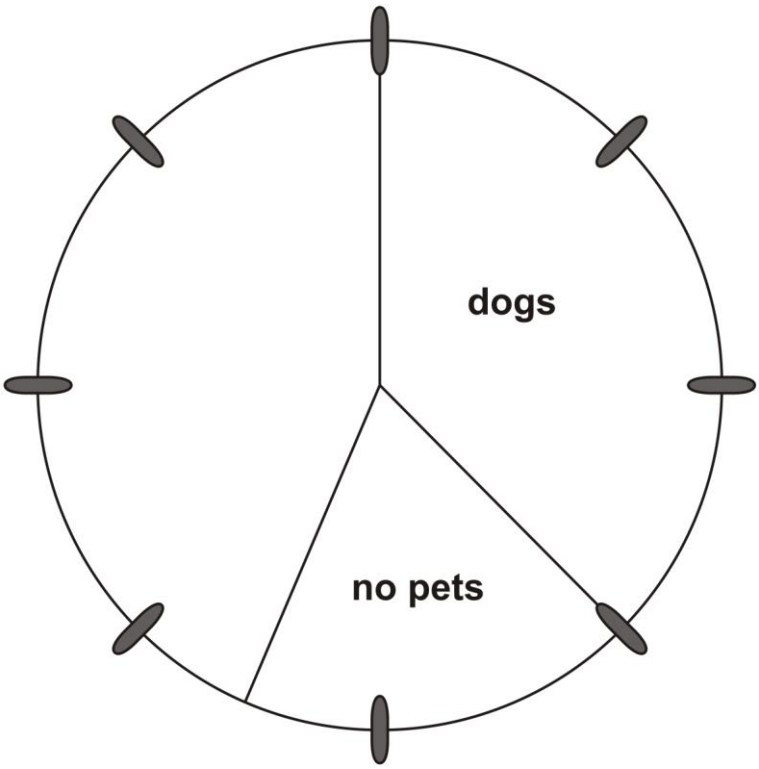
30 had **dogs**

25 had **cats**

10 had other **pets**

15 had no **pets**

Complete the pie chart to show this information.

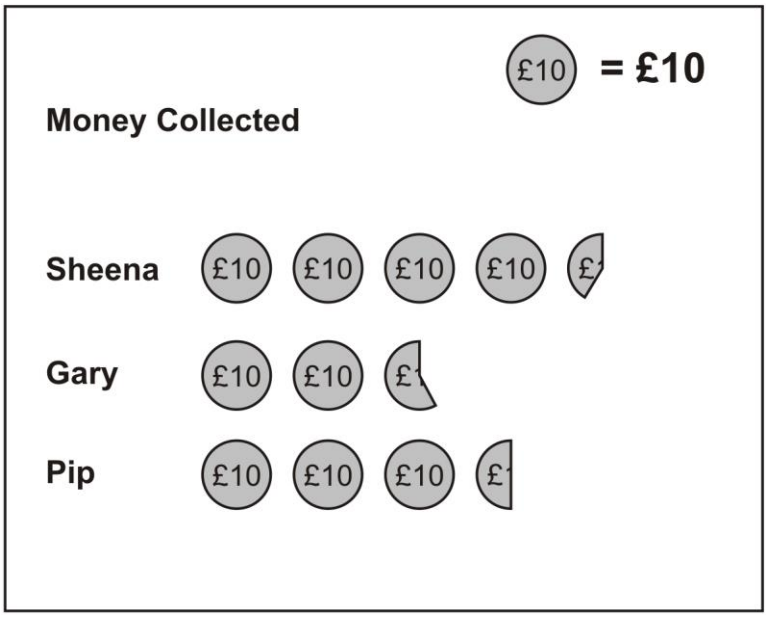


2 marks

Q19.

Three children do a sponsored silence.

This is a chart of the money they collected.



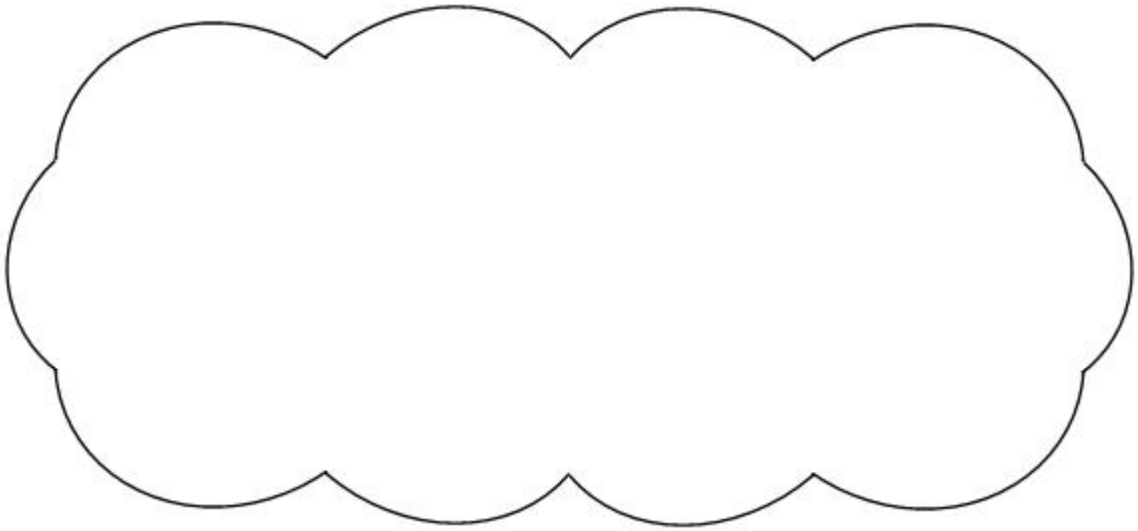
Estimate how much **Sheena** collected.

£

1 mark

Together **Gary** and **Pip** collected **more than £60**

Explain how the **chart** shows this.



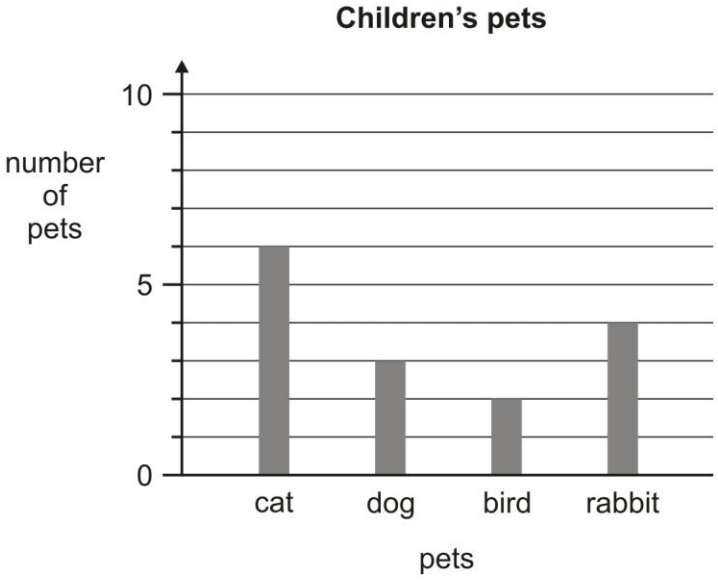
1 mark

Q20.

Here is a table of the pets owned by **six** children.

Name of child	Cat	Dog	Bird	Rabbit
David	3	1	0	0
Julie	0	0	1	2
Carl	2	0	0	1
Terry	0	1	0	1
Mary	0	2	0	0
Hawa	1	0	1	1

Here is a graph of the pets of **five** of the children.



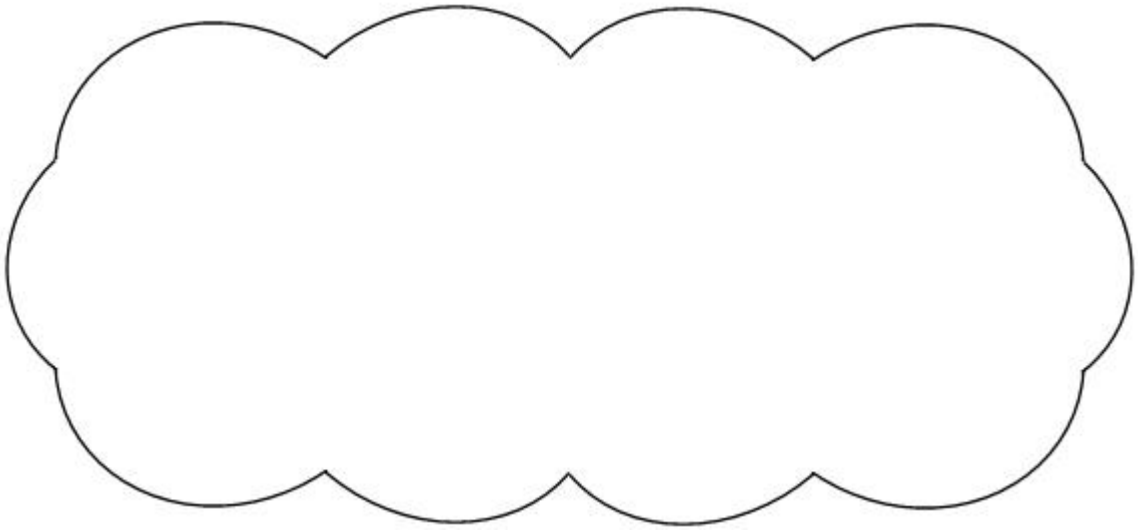
The pets of **one** of the children are not on the graph.

Whose pets are **not** on the graph?

_____

1 mark

Explain how you know.



1 mark

Q21.

Here is the calendar for August 1998.

August 1998

Sun	Mon	Tues	Wed	Thur	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

Simon's birthday is on **August 20th**.

In 1998 he had a party on the **Sunday after** his birthday.

What was the **date** of his party?

1 mark

Tina's birthday is on **September 9th**.

On what **day of the week** was her birthday in 1998?

1 mark

Q22.

Car Park charges	
Time	**Charge**
up to 1 hour	20p
1 to 2 hours	50p
2 to 3 hours	£1.00
3 to 4 hours	£1.70
over 4 hours	£5.00

Emma parks her car at **9.30 am**.

She collects the car at **1.20 pm**.

How much does she pay?

1 mark

Dan and Mark both use the car park.

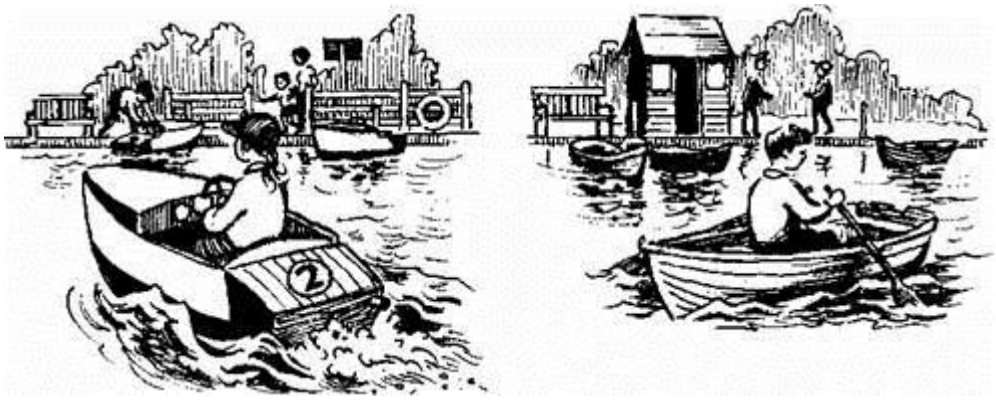
Dan says,

'I paid exactly twice as much as Mark but I only stayed 10 minutes longer'.

Explain how Dan could be correct.

1 mark

Q23.



Boat Hire	
Motor boats	**Rowing boats**
£1.50 for 15 minutes	£2.50 for 1 hour

How much does it cost to hire a **rowing boat** for three hours?

£

1 mark

Sasha pays **£3.00** to hire a **motor boat**.

She goes out at **3:20pm**.

By what time must she **return**?

pm

1 mark

Q24.

The table shows the cost of coach tickets to different cities.

		Hull	York	Leeds
Adult	single	£12.50	£15.60	£10.25
	return	£23.75	£28.50	£19.30
Child	single	£8.50	£10.80	£8.25
	return	£14.90	£17.90	£14.75

What is the total cost for a **return** journey to York for one adult and two children?

£

1 mark

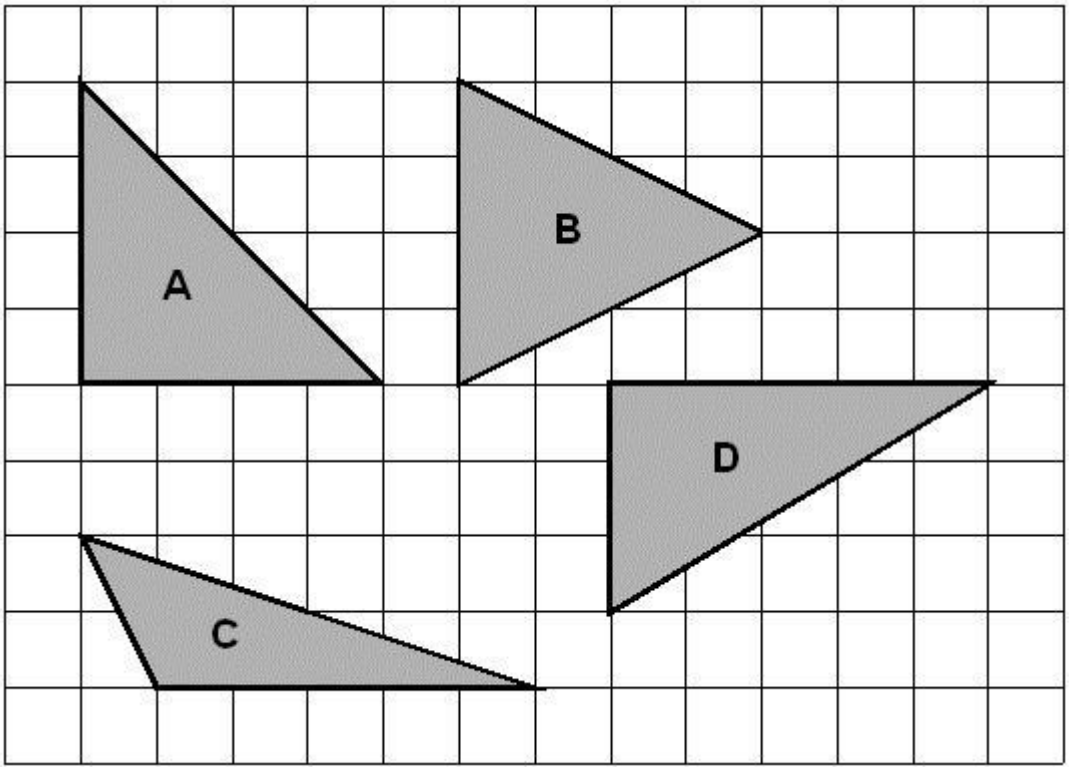
How much **more** does it cost for two adults to make a **single** journey to Hull than to Leeds?

£

1 mark

Q25.

Here are four triangles drawn on a square grid.



Write the letter for each triangle in the correct region of the sorting diagram.

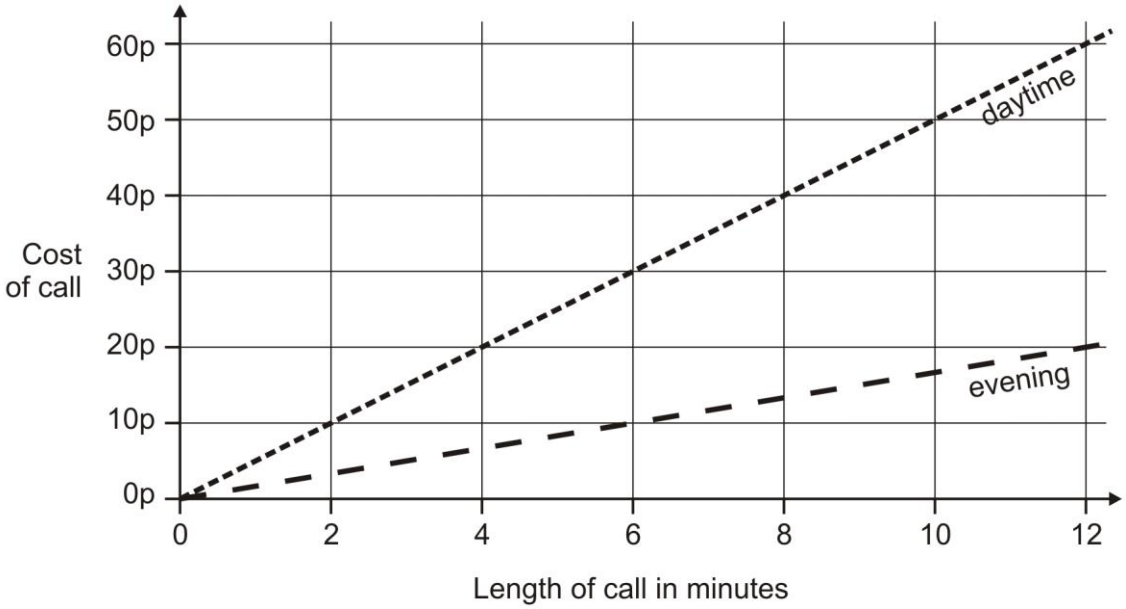
One has been done for you.

	has a **right** angle	has an **obtuse** angle	has 3 **acute** angles
is isosceles	**A**		
is **not** isosceles			

2 marks

Q26.

This graph shows the cost of phone calls in the daytime and in the evening.



How much does it cost to make a **9 minute** call in the **daytime**?

p

1 mark

How much **more** does it cost to make a **6 minute** call in the **daytime** than in the **evening?**

p

1 mark

Q27.

Here are the **start** and **finish** times of some children doing a sponsored walk.

	Start time	Finish time
Claire	9.30	10.55
Ruth	9.35	11.05
Dan	9.40	11.08
Tim	9.45	11.05

How much longer did Claire take than Tim?

minutes

1 mark

Q28.

Here is a sorting diagram for numbers.

Write a number **less than 100** in each space.

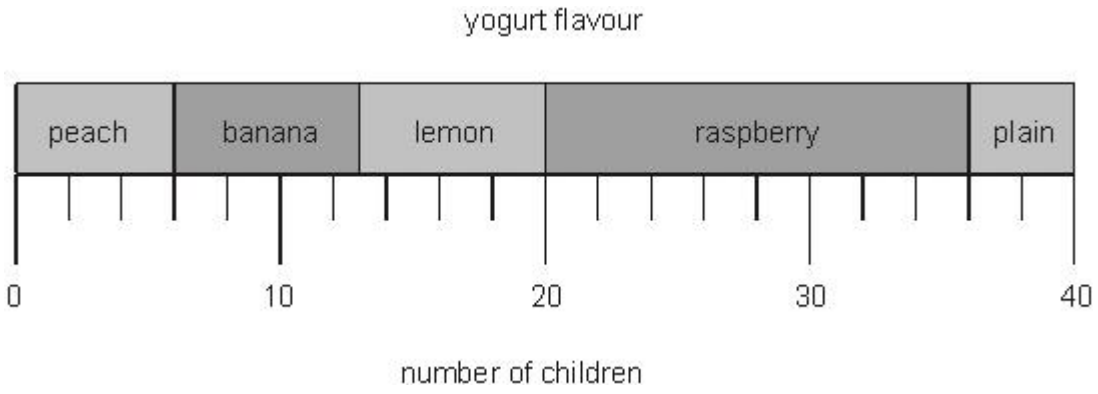
	even	**not** even
a square number		
not a square number		

2 marks

Q29.

40 children each chose their favourite flavour of yogurt.

This chart shows the results.



How many children chose **lemon** yogurt?

1 mark

How many more children chose **raspberry** than **plain** yogurt?

1 mark

Q30.

Here is a sorting diagram with four sections, **A**, **B**, **C** and **D**.

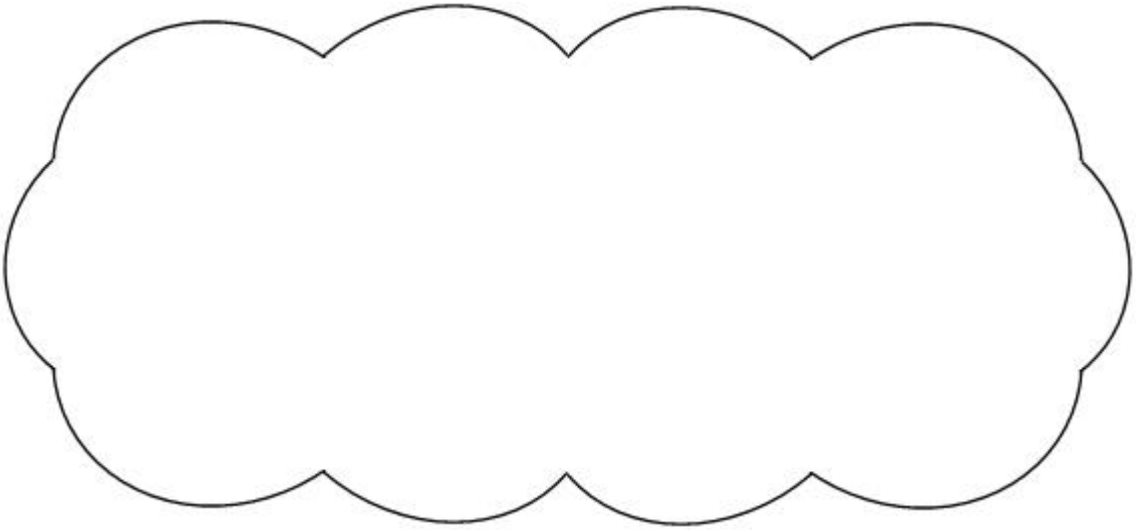
	multiple of 10	not a multiple of 10
multiple of 20	**A**	**B**
not a multiple of 20	**C**	**D**

Write a number that could go in section **C.**

1 mark

Section **B** can never have any numbers in it.

Explain why.



1 mark

Q31.

Some children ran in two races on sports day.

Here are their times.

	100 m race	800 m race
Elise	15.9 seconds	3 minutes 02 seconds
Jake	19.7 seconds	2 minutes 58 seconds
Teri	16.8 seconds	3 minutes 01 seconds
Neil	17.1 seconds	2 minutes 59 seconds
Barry	18.4 seconds	2 minutes 57 seconds

Who finished the 100 m race in **second** place?

1 mark

In the 800 m race, how many seconds did Barry finish ahead of Elise?

seconds

1 mark

Q32.

Here is a diagram for sorting numbers.

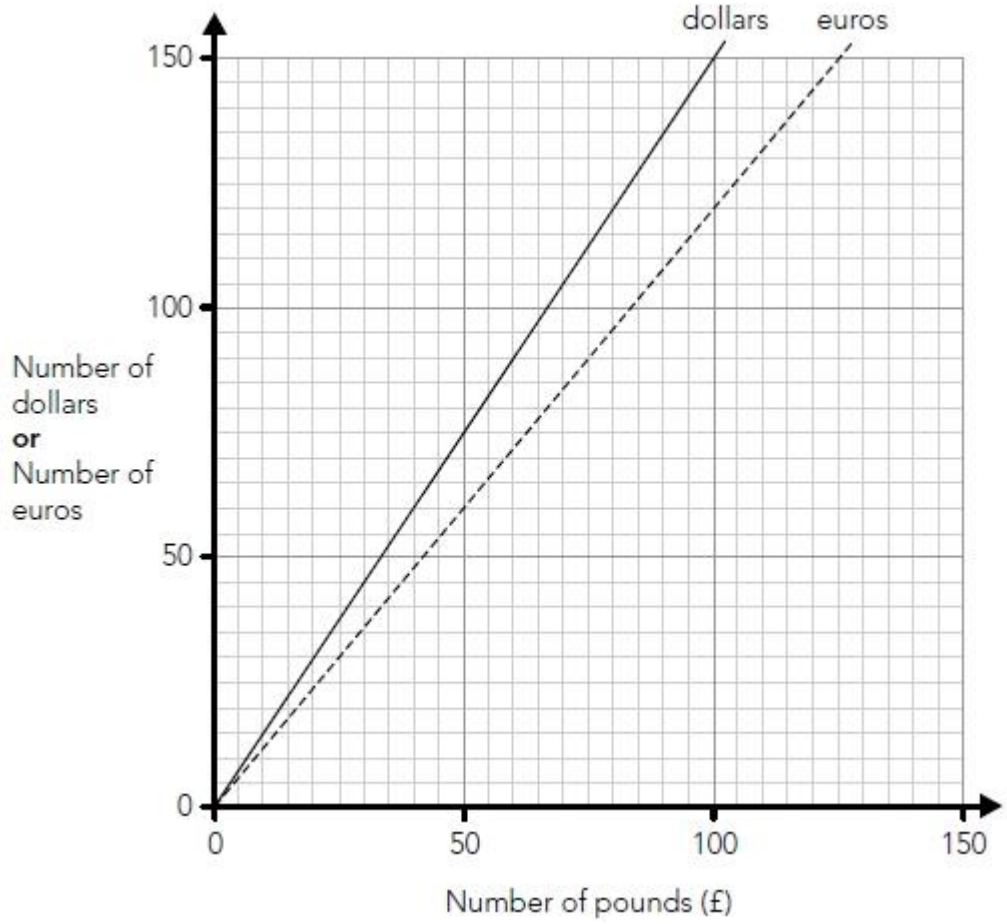
Write **one number** in each white section of the diagram.

	less than 1000	1000 or more
multiples of 20		
not multiples of 20		

2 marks

Q33.

Nik uses this graph to change between pounds (£), dollars and euros.



Use the graph to work out the missing numbers below.

The first one is done for you.

£70	is about the same as	**84 euros**
£70	is about the same as	**_____dollars**

120 dollars	is about the same as	**£_____**
120 euros	is about the same as	**_____dollars**

2 marks

Q34.

This table shows when flights take off at an airport.

Flight number	Destination	Take-off time
AX40	Paris	13:35
BH253	Berlin	14:05
CG008	Rome	15:25
DP369	Paris	15:40
EZ44	Lisbon	16:15
FJ994	Dublin	17:25

How many flights take off between 3pm and 5pm?

1 mark

How much later does the second flight to Paris take off than the first?

1 mark

The flight to Dublin takes 50 minutes.

What time does it arrive in Dublin?

:

1 mark

Q1.

Award **TWO** marks for only two correct boxes ticked, as shown:

There are more cheetahs than jaguars.	✓
The total number of lions and tigers is 10	
One-quarter of the big cats are cheetahs.	✓
There are more than 5 jaguars.	

Award **ONE** mark for:

- only one correct box ticked and no incorrect boxes ticked

OR

- two correct boxes ticked and one incorrect box ticked.

Accept alternative unambiguous positive indications, e.g. Y.

Up to 2 marks

[2]

Q2.

(a) 7

Do not *accept −7 or 7−*

1

(b) Oslo

Accept unambiguous abbreviations or recognisable misspellings.

1

[2]

Q3.

The correct time circled as shown:

Leaves London	Arrives Paris
12:01	15:22
12:25	15:56
13:31	16:53
14:01	17:26
14:31	17:53
15:31	18:53
16:01	19:20

Accept alternative unambiguous positive indications, e.g. 14:01 ticked or underlined.

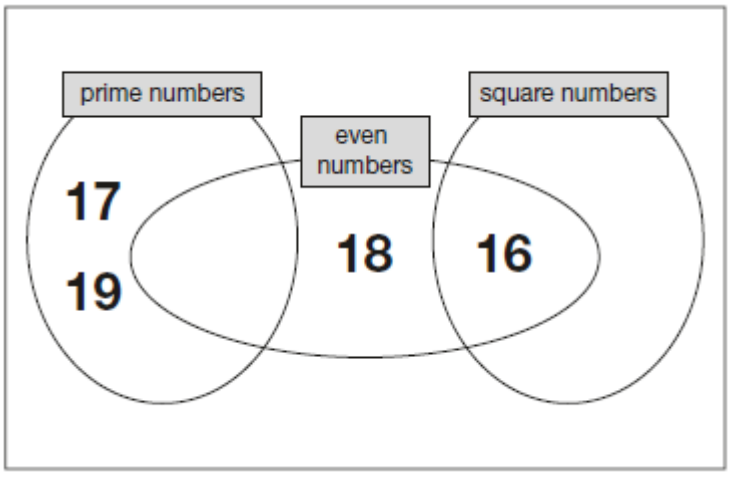
Accept 17:26 circled in addition to 14:01, provided no other time is circled.

***Do not** accept only the arrival time 17:26 circled.*

[1]

Q4.

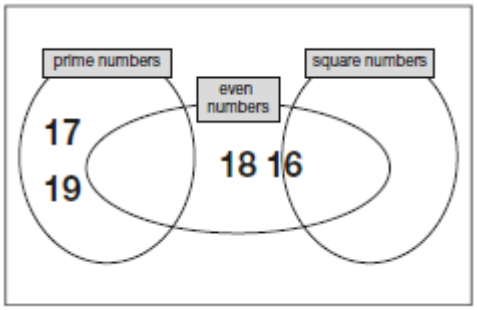
Award **TWO** marks for all four numbers placed correctly as shown:



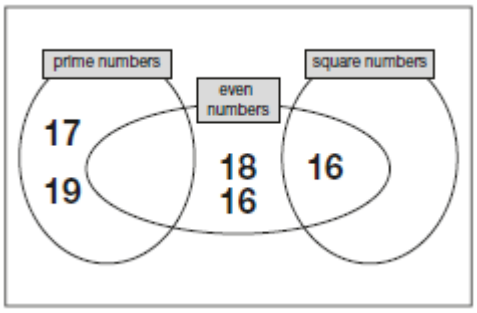
If the answer is incorrect, award **ONE** mark for three numbers placed correctly.

Accept alternative unambiguous indications, e.g. lines drawn from the numbers to the appropriate regions of the diagram.

***Do not** accept numbers written in more than one region, e.g.*



OR



Up to 2m

[2]

Q5.

(a) 1974 **OR** 1975 **OR** 1976

1

(b) A whole number answer in the range 130 000 to 180 000 **inclusive**.

1

(c) A whole number answer in the range 510 000 to 550 000 **exclusive**.

Do not *accept 510 000* ***OR*** *550 000*

1

[3]

Q6.

(a) 38

The answer is a time interval.

1

(b) 10:21

The answer is a specific time.

1

(c) 10:58

1

[3]

Q7.

Gives a correct description that indicates the delivery cost is constant, eg:

- The delivery cost is always £5

- The cost is always £5 no matter how much the toy costs
- Delivery stays the same as the cost of toy increases

Accept minimally acceptable explanation, eg:

- *It is £5*

Accept omission of the actual delivery cost, eg:

- *It always costs the same*
- *The cost is the same*
- *The cost of the toy does not affect the delivery cost*

! Condone correct response with the pound sign omitted, eg:

- *It is always 5*

! Condone explanations which refer to toys costing up to £20

***Do not accept** incomplete or ambiguous explanation, eg:*

- *They are equal amounts*

[1]

Q8.

Wednesday

Accept unambiguous abbreviations or recognisable misspellings.

1

6

***Do not** accept −6*

1

[2]

Q9.

(a) 109

1

(b) An explanation that recognises that 100 people get up before 9am which is two-thirds of the total (150).

- ‘13 + 28 + 59 = 100 which is two-thirds of the total’
- ‘$\frac{1}{3}$ of 150 = 50 and 2 × 50 = 100’
- ‘$\frac{2}{3}$ of 150 is 100’
- ‘36 + 14 = 50 which is one-third after 9am’

***Do not** accept vague or incomplete explanations, eg:*

- *‘One-third are 9 o’clock or later’*
- *‘100 got up at 9am’*

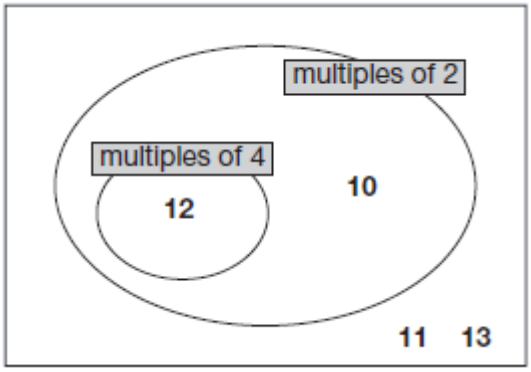
- *'Twice as many got up before 9am.'*
- *'13 + 28 + 59 = 100'*

U1

[2]

Q10.

Award **TWO** marks for all four numbers correctly placed as shown:



If the answer is incorrect, award **ONE** mark for three numbers correctly placed.

Accept alternative unambiguous indications, eg lines drawn from the numbers to the appropriate regions of the diagram.

***Do not** accept numbers written in more than one region*

Up to 2

[2]

Q11.

(a) 4 km

1

(b) 4:15pm

The answer is a specific time

1

[2]

Q12.

(a) 16

1

(b) A whole number in the range 180 to 190 inclusive

1

[2]

Q13.

(a) An answer in the range 1/5 to 3/10 OR 20% to 30%
OR 0.2 to 0.3 INCLUSIVE.

Numbers in range 20 to 30 must have % sign, eg:

- *Do not **accept** '25'*

1

(b) An answer in the range 15 to 25 kg INCLUSIVE.

1

(c) Award **TWO** marks for correct answer of 91 kg.

If answer is incorrect, award **ONE** mark for appropriate calculation, eg:

- 70/100 × 130 = wrong answer;
- 10% is 13 so 70% 7 × 313 = wrong answer.
- H + 2H + H + 2H = 126
- 20 + 40 + 20 + 40 = 120

*A calculation **MUST** be performed for award of one mark.*
'70/100 × 130' alone is insufficient for award of one mark.

Up to 2

[4]

Q14.

(a) 9

1

(b) 8th of March

Accept 8
Accept '7th – 8th' or similar.
***Do not** accept 7th.*

1

(c) 39.1 **OR** 39.2

1

[3]

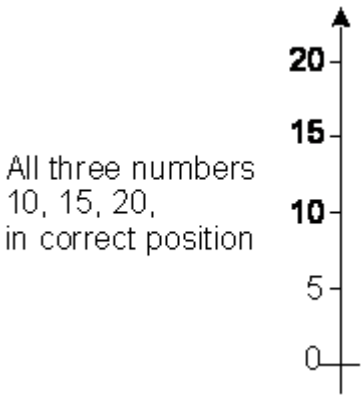
Q15.

(a) 95p

*Accept £0.95 **OR** 0.95 **OR** £0.95p*
***OR** 95 **OR** 95 pence*
***OR** answers in words, in the answer box or elsewhere on the page.*

1

(b) All three numbers, 10, 15, 20, in correct position.



Accept any positioning of 10, 15, 20 as long as it is clear that they refer to the marks on the axis in the correct order.

1

(c) Award **ONE** mark for correct answer of £17.10 with evidence of any appropriate working out of the answer, eg:

- (18 × £1) – (18 × 5p) = £18 – 90p = £17.10
- 18 × 90 = 1620 **OR** 18 × 5 = 90 1620 + 90 = £17.10

*Accept £17.10p **OR** £17 10 **OR** £17 10p **OR** 1710p **OR** 17.10*
***OR** answers in words, in the answer box or elsewhere on the page.*

*The mark can **only** be awarded if there is evidence of a calculation taking place. It cannot be awarded if an expression is set out but no working is shown, eg:*

- *(10 × 95) + (8 × 95) = £17.10*
- *(20 × 95) – (2 × 95) = £17.10*
- *18 × 95 = £17.10*

1

[3]

Q16.

(a) 298

1

(b) Award **TWO** marks for the correct answer of 513

If the answer is incorrect, award **ONE** mark for evidence of an appropriate strategy, eg:

- 334 + 179 **OR** 179 + 334

Both the numbers must be correct.

Up to 2

[3]

Q17.

(a) 400 *Accept any value between 380 and 420 inclusive.*

1

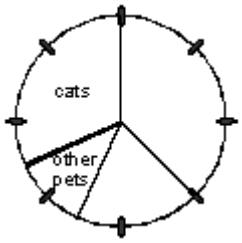
(b) 45 *Accept any value between 43 and 47 inclusive.*

1

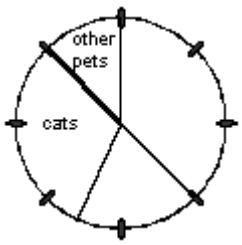
[2]

Q18.

2 marks for remainder of or 2 circle correctly divided into a ‘l piece’ sector and a ‘2½ piece’ sector, and labelled ‘other pets’ and ‘cats’ respectively,



or 1 mark for remainder of circle divided into a '1 piece' sector and '2½ piece' sector, but not labelled or labelled incorrectly.



[2]

Q19.

(a) Answer in the range of £43 to £44 inclusive.

1

(b) Explanation which implies that Gary has an amount greater than £25 but less than £27.50 and that Pip has £35±1, so that their total is greater than £60, eg

- 'Gary has 26 Pip has 35';
- 'The chart shows that Gary has 2 and $^{2}/_{3}$ and Pip has 3 and a half, so that's over 60 pounds';
- 'The whole symbols together make 50 and then it's 2 halves and Pip has half and Gary has more than half'.

***Do not** accept vague or arbitrary answers, eg*

- *'By the number of coins';*
- *'There are 5 ten pounds and 2 halves';*
- *'A coin = 10 pounds and a broken coin = a fraction of a coin so a fraction of the money'.*

1

[2]

Q20.

(a) Terry

If an answer is not given but Terry is unambiguously identified
*in the second part of the question then award the mark for **part (a)**.*

1

(b) Explanations which **EITHER** identify all the discrepancies between the table and the graph **OR** which identify some of the discrepancies between the table and the graph and then use logical argument to identify Terry, eg

- ‘There’s a dog and a rabbit wrong which is what Terry’s got’;
- ‘Because there are only 4 rabbits when there are supposed to be five and only three dogs’;
- ‘The dogs and rabbits aren’t right’;
- ‘The cats are okay but there’s a dog missing so it must be Terry’.

***DO NOT** accept incomplete, vague or arbitrary answers, eg*

- *Only 3 dogs are on the graph and there’s 4’;*
- *‘There are 17 pets but only 15 on the graph’;*
- *‘They are not all there’;*
- *‘I looked on the graph’.*

Accept correct, unambiguous explanations even if the wrong person is named in the first part of the question.

1

[2]

Q21.

(a) 23rd of August **OR** 23.8.98

*Accept 23rd **OR** 23 **OR** unambiguous circling of the correct date on the calendar.*

1

(b) Wednesday

*Accept Wed **OR** recognisable misspellings of Wednesday **OR** Wednesday ringed.*

1

[2]

Q22.

(a) £1.70 **OR** 170p

*Accept 1.70 **OR** 170 **OR** unambiguous indication on the table.*

1

(b) Explanation which suggests that Dan stayed just over 2 hours and Mark stayed just under 2 hours, eg

‘Dan stayed 2 hours and 5 minutes so he paid £1 but Mark stayed 5 minutes less than 2 hours and paid 50p’;

‘Mark stayed just under 2 hours and Dan stayed the next price up which is double’.

*Accept references to ‘**2** hours’ as part of the 1 to 2 hours charging band **OR** as part of the 2 to 3* hours charging band*.*

***Do not** accept vague or arbitrary answers, eg*

‘If you pay more you stay longer’;

‘Mark went before the next hour, but Dan didn’t’;

‘The ten minutes could have passed one hour’.

***Do not** accept explanations which refer to the wrong charging band, eg*

‘Mark stayed 4 hours and Dan stayed 4 hours and 10

minutes'.

1

[2]

Q23.

(a) £7.50

*Accept £7.50p **OR** £7 50*

***Do not** accept £7.5 **OR** £750p **OR** £750*

1

(b) 3:50 pm

Accept '10 to 4' or equivalent.

*Accept 15:50 **OR** 350 **OR** 1550*

1

[2]

Q24.

(a) £64.30

*Accept £64.30p **OR** £64 30*

***Do not** accept £6430 **OR** £6430p **OR** £64.3*

1

(b) £4.50

*Accept £4.50p **OR** £4 50*

***Do not** accept £450 **OR** £450p **OR** £4.5*

*If the final '0' is missing from both answers, ie answers given are £64.3 and £4.5 respectively, award **ONE** mark only in (b).*

1

[2]

Q25.

Award **TWO** marks for three letters in the correct regions of the sorting diagram, as shown:

A		**B**
D	**C**	

Award **ONE** mark for two letters in the correct regions of the sorting diagram.

***Do not** accept letters that are written in more than one region.*

Accept alternative indications such as lines drawn from the shapes to the appropriate regions of the sorting diagram.

Up to 2

[2]

Q26.

(a) Answer in the range 44p to 46p inclusive.

1

(b) 20p

*Accept £0.20p **OR** £0 20*

***Do not** accept 0.20p **OR** £20p*

1

[2]

Q27.

5

[1]

Q28.

Award **TWO** marks for a correct number written in each of the four boxes.

	even	not even
a square number	0 **OR** 4 **OR** 16 **OR** 36 **OR** 64	1 **OR** 9 **OR** 25 **OR** 49 **OR** 81
not a square number	even **AND** not a square **AND** less than 100	odd **AND** not square **AND** less than 100

If the answer is incorrect, award **ONE** mark for three boxes completed correctly.

Accept more than one number in each box, provided all are correct.

Up to 2

[2]

Q29.

(a) 7

1

(b) 12

1

[2]

Q30.

Any odd numbered multiple of 10, ie 10 **OR** 30 **OR** 50 **OR** 70 **OR** 90 **OR** any number ending with any of the pairs of digits above.

1

An explanation which recognises that all multiples of 20 are also multiples of 10, eg:

- 'Because all the numbers in the 20 times table are also in the 10 times table'
- 'Because all multiples of 20 are multiples of 10'
- 'Because 20 is in the 10 times table'
- 'All multiples of 20 go in box A because 10 goes into them'
- '20 is a multiple of both 20 and 10, and so is 40, 60, etc'

- ‘Because if it’s not a multiple of 10, it can’t be a multiple of 20’
- ‘Because if it is a multiple of 20, it has to be a multiple of 10’
- ‘Because 10 is a factor of 20’.

***Do not** accept vague or arbitrary explanations, eg:*

- *‘Because 40 is a multiple of 10’*
- *‘Because they would be in box A instead’*
- *‘Because all the multiples of 10 are multiples of 20’*
- *‘Because 10 is a multiple of 20’.*

1

[2]

Q31.

(a) Teri

Accept recognisable misspellings.

***Do not** accept 16.8*

1

(b) 5

1

[2]

Q32.

Award **TWO** marks for one correct number written in each white section of the table, eg

	less than 1000	1000 or more
multiples of 20	100	2000
not multiples of 20	19	1001

If the answer is incorrect, award **ONE** mark for three sections completed correctly.

*Accept more than one number in each section as long as **all** are correct.*

Up to 2

[2]

Q33.

105 ± 1

then

80 ± 1

1

150 ± 1

1

U1

[2]

Q34.

(a) 3

1

(b) 2 hours 5 minutes

The answer is a time interval

1

(c) 18:15

The answer is a specific time

Accept 6:15

1

[3]