1. **Speed limits**

This table shows the fastest speeds, in mph, that different types of vehicles are allowed to travel.

Type of vehicle	Built-up area	Single carriageway	Dual carriageway	Motorway
Car	30	60	70	70
Car towing a caravan	30	50	60	60
Bus or coach	30	50	60	70

(a) A car is towing a **caravan**.

What is the fastest speed it is allowed to travel on a **single carriageway**?

mph

1 mark

(b) A **car** and a **coach** are travelling on a **dual carriageway**.

How much faster is the car allowed to travel?

mph

1 mark

2. **Calculators**

A teacher asked each pupil in her class:

‘How many calculators do you own?’

The frequency table shows the results.

Number of calculators	Frequency
0	5
1	22
2	1

(a) How many pupils are in the class?

pupils

1 mark

(b) Altogether, how many calculators do the pupils in the class own?

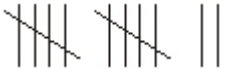
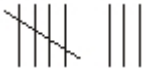
calculators

1 mark

3. **Titles**

Ben recorded the number of words in the titles of books.

The tally chart shows his results.

Titles of books	
one word	
two words	
three words	
four words	
five words	
six or more words	

(a) How many books had titles with **four** words?

1 mark

(b) Altogether, how many books had titles with **fewer than three** words?

1 mark

(c) What was the **most common** number of words in the title?

words

1 mark

4. Sara drew this pictogram to show the average number of hours animals sleep each day.

Key: ◆ stands for 2 hours

Bat	◆◆◆◆◆◆◆◆◆◆◆
Gorilla	◆◆◆◆◆◆
Horse	◆◆
Human	◆◆◆◆
Mouse	◆◆◆◆◆◆◆

(a) Which animal sleeps for a **shorter** time each day **than a human**?

1 mark

(b) A **bat** sleeps for longer each day than a **mouse**.
How many hours longer?

hours

1 mark

(c) Now Dave draws another pictogram to show the same information.
Here is Dave's key:

Key: ● stands for **3 hours**

How many circles show the number of hours that a **gorilla** sleeps each day?

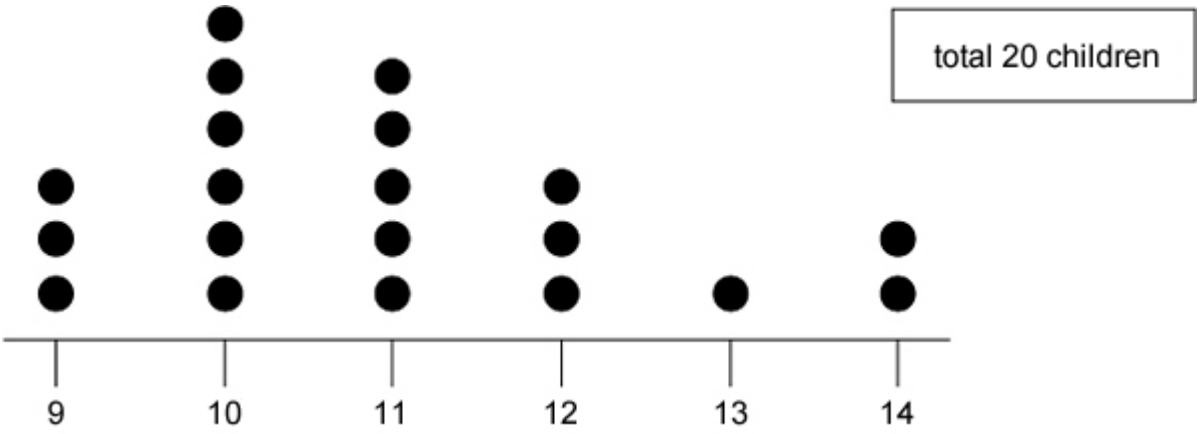
circles

1 mark

5. **Youth club**

20 children went to a youth club.

The dot plot shows their ages in years.



(a) What was the most common age?

years

1 mark

(b) How many of the children were aged **12 or older**?

1 mark

(c) **14 children** went to a different youth club.

Here is information about their ages in years.

The youngest children were aged 10
3 children were aged 11
More children were aged 12 than were aged 11
The most common age was 13
No children were older than 13

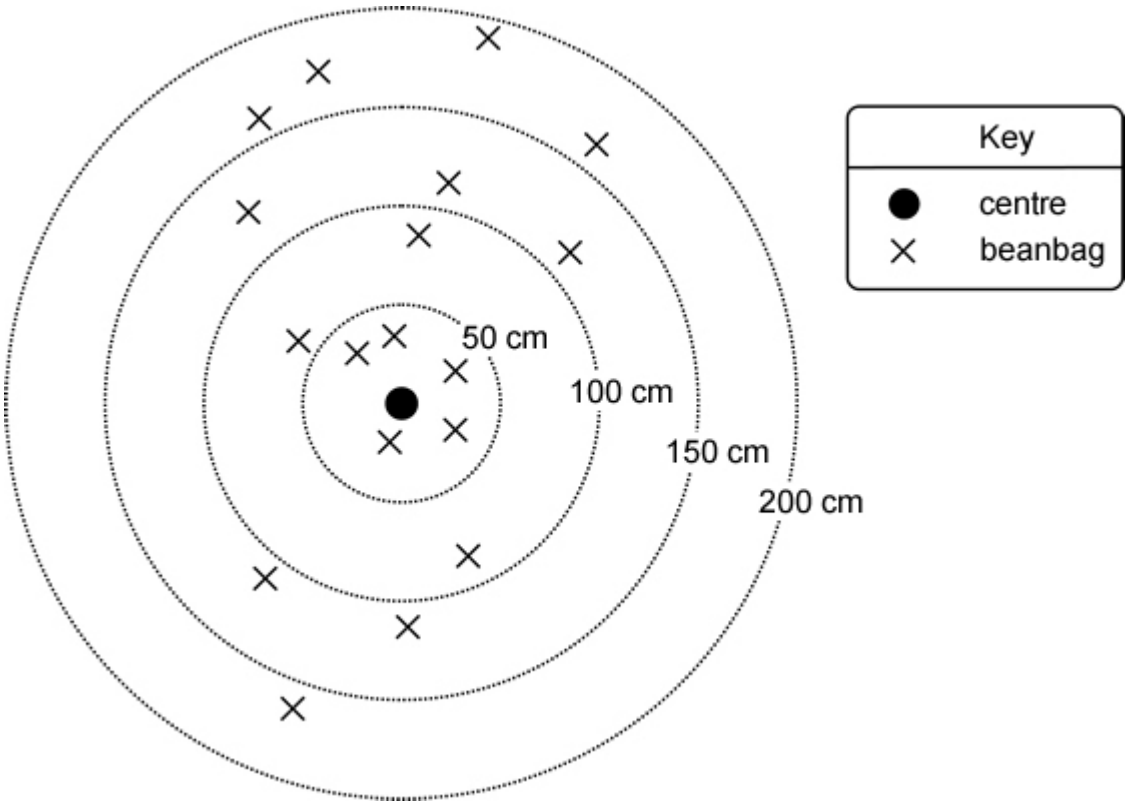
Show this information on the dot plot below.

2 marks

6. **Beanbag**

Children threw beanbags and tried to make them land on the centre of a target.

The diagram shows how far from the centre each beanbag landed.



(a) Which beanbag was about **190cm** from the centre? Put a ring round it.

1 mark

(b) Altogether, how many beanbags were **less than 100cm** from the centre?

1 mark

(c) Each child threw **three beanbags**. How many children played the game?

1 mark

7. Look at the table.

Name	Male/Female	Age (years)	Height (cm)
Alice	female	36	155
Frank	male	54	175
Gina	female	42	168
Milly	female	16	162
Rani	male	24	178

Use the table to answer the questions.

(a) What is the **name** of the oldest person?

1 mark

(b) What is the **height** of the tallest female?

cm

1 mark

8. The table shows information about 10 plants.

Plant	Colour of flowers	Height of plant (cm)
A	pink	70
B	red	120
C	pink	60
D	red	110
E	blue	80
F	white	40
G	pink	50
H	white	60
I	pink	80
J	white	60

(a) What is the **most common** height of the plants?

cm

1 mark

(b) How many of the plants have **pink** flowers and are **less than 70cm** in height?

1 mark

(c) The tallest plant is **greater than 1 metre** in height.
How many centimetres greater?

cm

1 mark

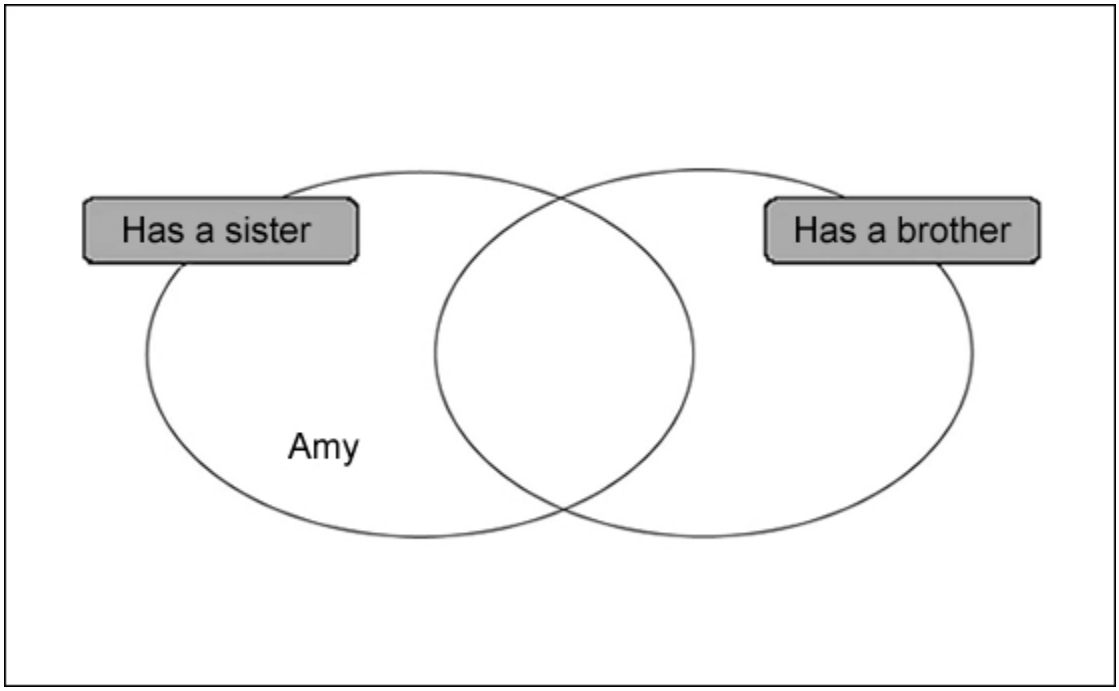
9. Ali asked four people:

Do you have a sister? Do you have a brother?

The answers are shown in the table below.

	Has a sister	Has a brother
Amy	Yes	No
John	No	Yes
Gill	Yes	Yes
Fred	No	No

Write the names John, Gill and Fred in the correct places on the diagram below.

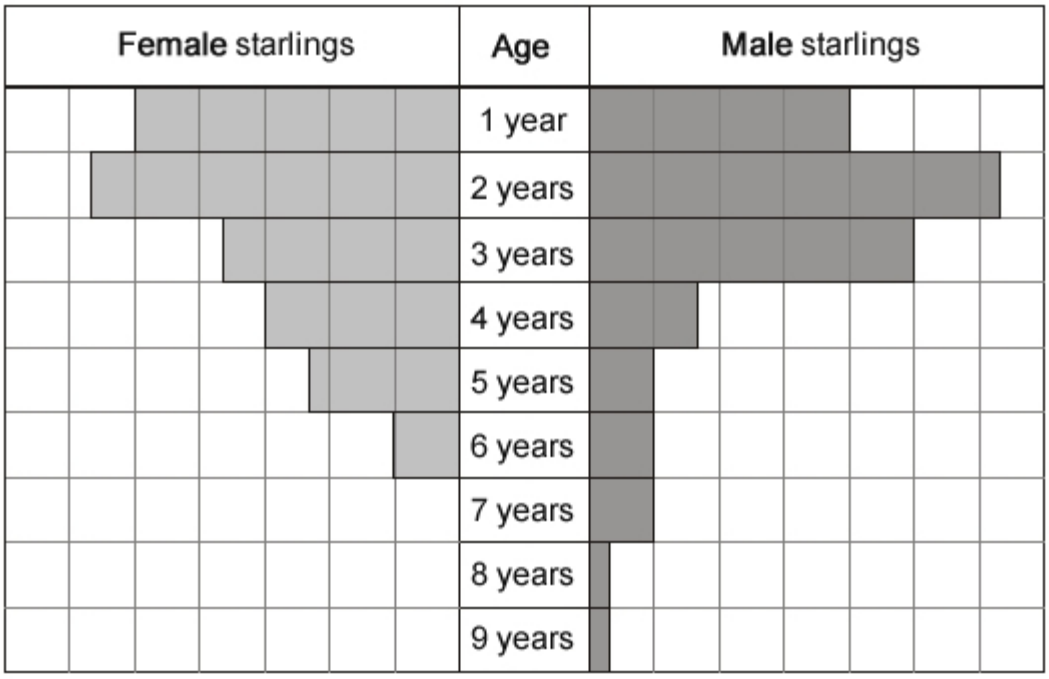


2 marks

10. **Starlings**

Starlings are birds that live in groups.

The chart shows the **ages** of a group of starlings.



In the chart, each square represents **3** starlings.

(a) How many **female** starlings are aged **4 years**?

female

1 mark

(b) How many **male** starlings are aged **4 years**?

male

1 mark

(c) More male starlings than female starlings are aged **6 years or older**.

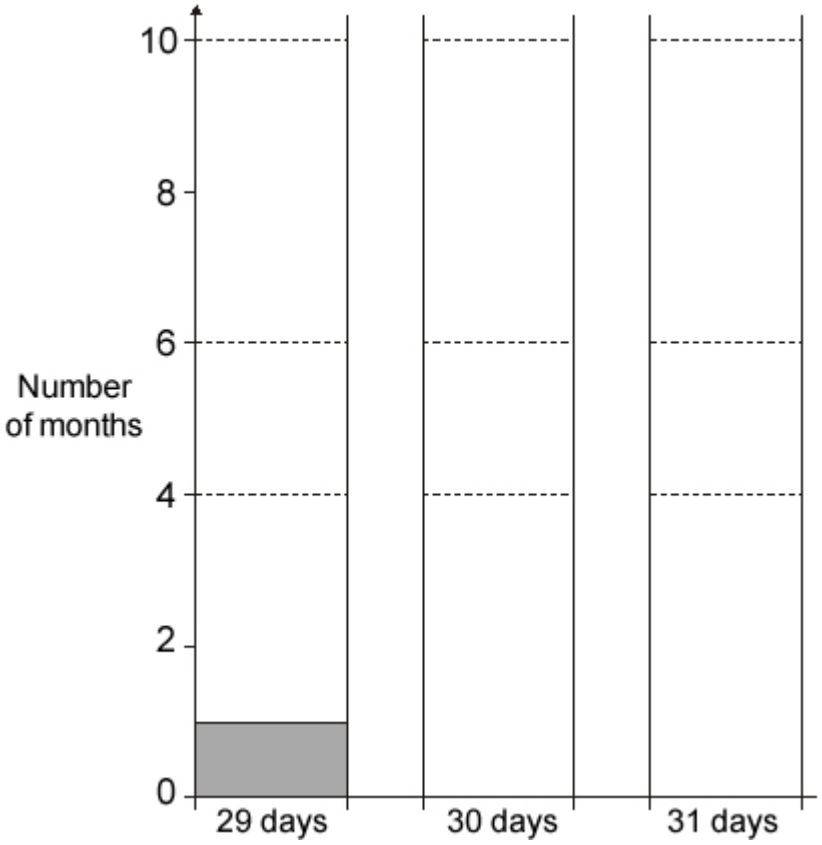
How many more?

1 mark

11. In a leap year:

1 month has 29 days
4 months have 30 days
7 months have 31 days

Complete the bar chart to show this information.



2 marks

12. **Sugar**

This question is about the number of bags of sugar you could buy with £10

Key: 

= 4 bags

Year	Number of bags
1995	
1999	

(a) In 1995 you could buy 16 bags of sugar.

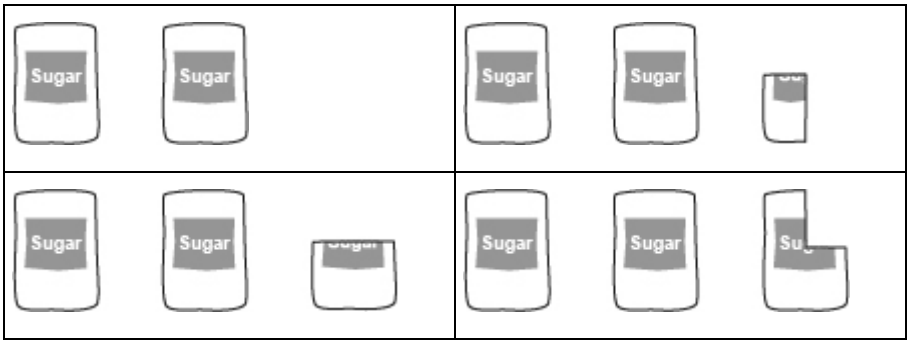
How many bags of sugar could you buy in **1999**?

1 mark

(b) In 2003 you could buy 9 bags of sugar.

Which drawing below represents **9 bags** of sugar?

Tick (✓) the correct drawing.



1 mark

13. Five children took part in a tennis competition.

They each played five matches.

This table shows how many matches each child won, drew or lost.

	won	drew	lost
Steven	1	3	1
Mark	1	1	3
Laura	2	3	0
Jackie	3	0	2
Tommy	0	4	1

How many children lost more games than they drew?

1 mark

Each child scores two points for a win,

one point for a draw,

no points for a loss.

Who scored the most points?

1 mark

14. **Museum**

The table shows how many people visit a museum in five weeks.

Week	Number of visitors	Rounded to the **nearest hundred**
1	453	500
2	328	
3	557	
4	299	
5	356	

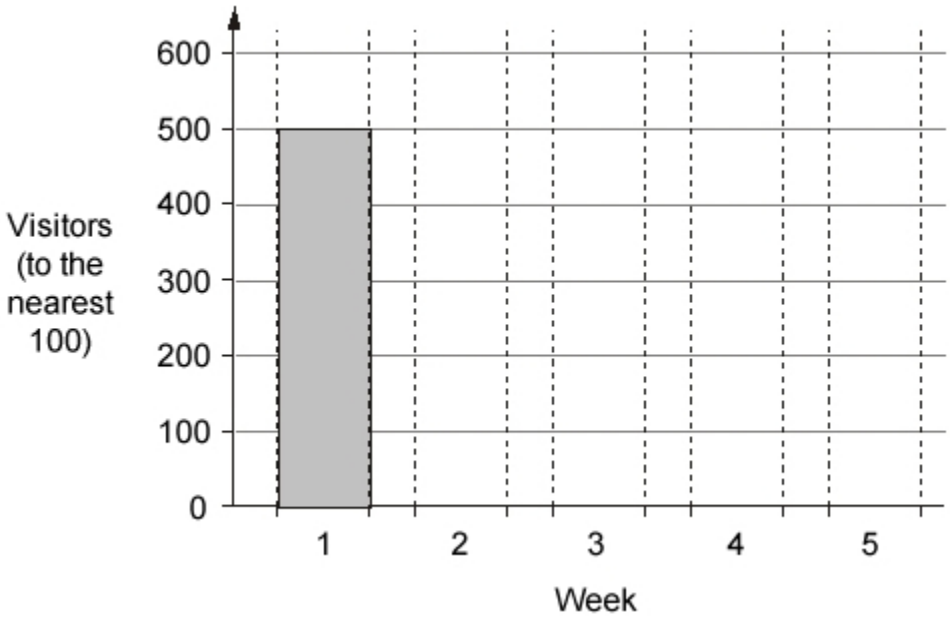
(a) Complete the table above by rounding each number to the **nearest hundred**.

The first one is done for you.

1 mark

(b) Now use the **rounded values** to complete the bar chart below.

The first bar is done for you.

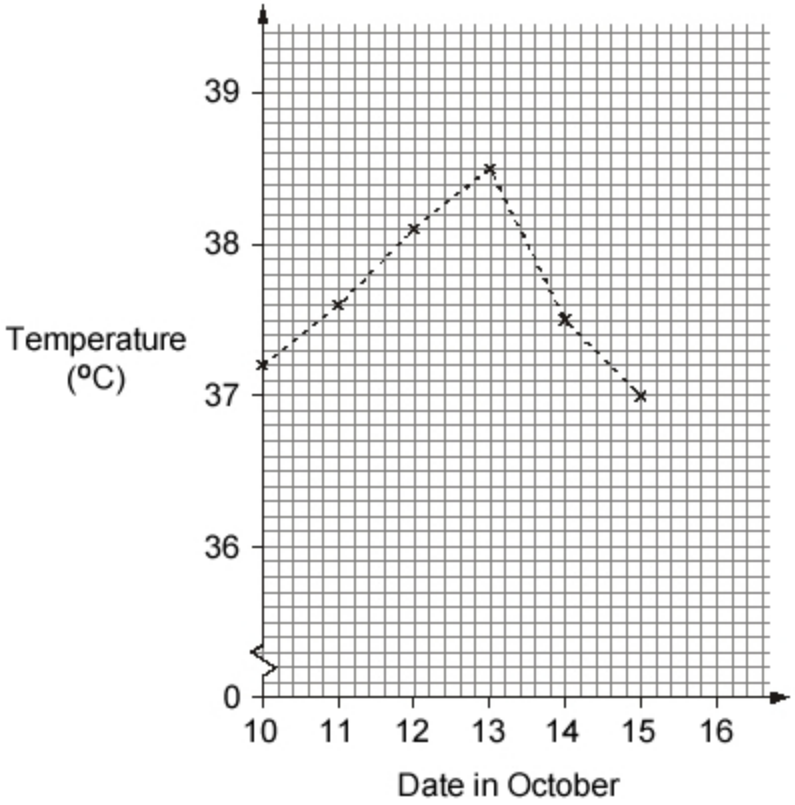


2 marks

15. **Temperature chart**

In October, Jack was ill.

Here is his temperature chart.



(a) What was Jack's **highest** temperature?

°C

1 mark

(b) On 16th October, Jack's temperature was 36.7°C

Mark this point on the graph.

1 mark

16. **Street lights**

The table shows the times that street lights come on one night and go off the next morning.

City	Time the lights come **on (pm)**	Time the lights go **off (am)**
Belfast	6:45	6:13
Glasgow	6:40	6:05
London	6:21	5:51
Manchester	6:30	5:59
Newcastle	6:28	5:55

(a) Complete the sentence below.

In **Manchester**, the lights come **on** 15 minutes earlier than

they do in _____ .

1 mark

(b) In **Glasgow**, the lights go **off** later than they do in **Newcastle**.

How much later?

minutes

1 mark

(c) In **Ashford** the lights come **on** at **6:20pm**.

The lights go off **11** $\frac{1}{2}$ **hours later**.

Complete the table below.

City	Time the lights come **on (pm)**	Time the lights go **off (am)**
Ashford	6:20	_____ : _____

1 mark

17. **Recycling**

Look at the information about recycling places in one town.

Recycling place	Glass	Cans	Plastic	Paper	Clothes	Shoes
Supermarket A	✓	✓		✓	✓	✓
Supermarket B	✓					
Supermarket C	✓	✓	✓			✓
Car park D	✓			✓	✓	
Car park E	✓	✓				
Road F	✓	✓		✓		

(a) How many of these places recycle **paper**?

1 mark

(b) One of these places recycles **plastic**.

Which place is this?

1 mark

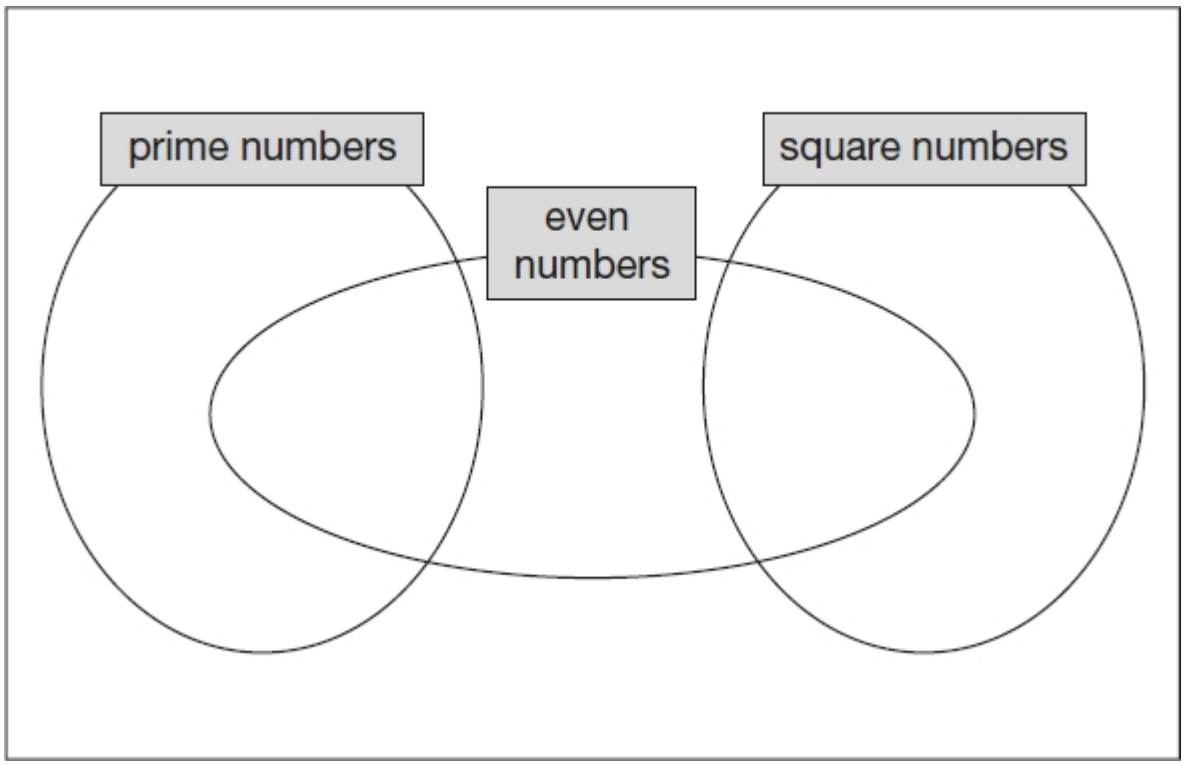
(c) Molly wants to go to **one** of the places to recycle **cans and clothes**.

Which place should she go to?

1 mark

18. Write each number in its correct place on the diagram.

35 36 37 38



2 marks

19. These are the opening times at Sparkles Swimming Pool.

Monday	Closed
Tuesday to Friday	11am to 6:30pm
Saturday	9am to 6pm
Sunday	10:30am to 4:30pm

How many hours is the swimming pool open on Saturdays?

hours

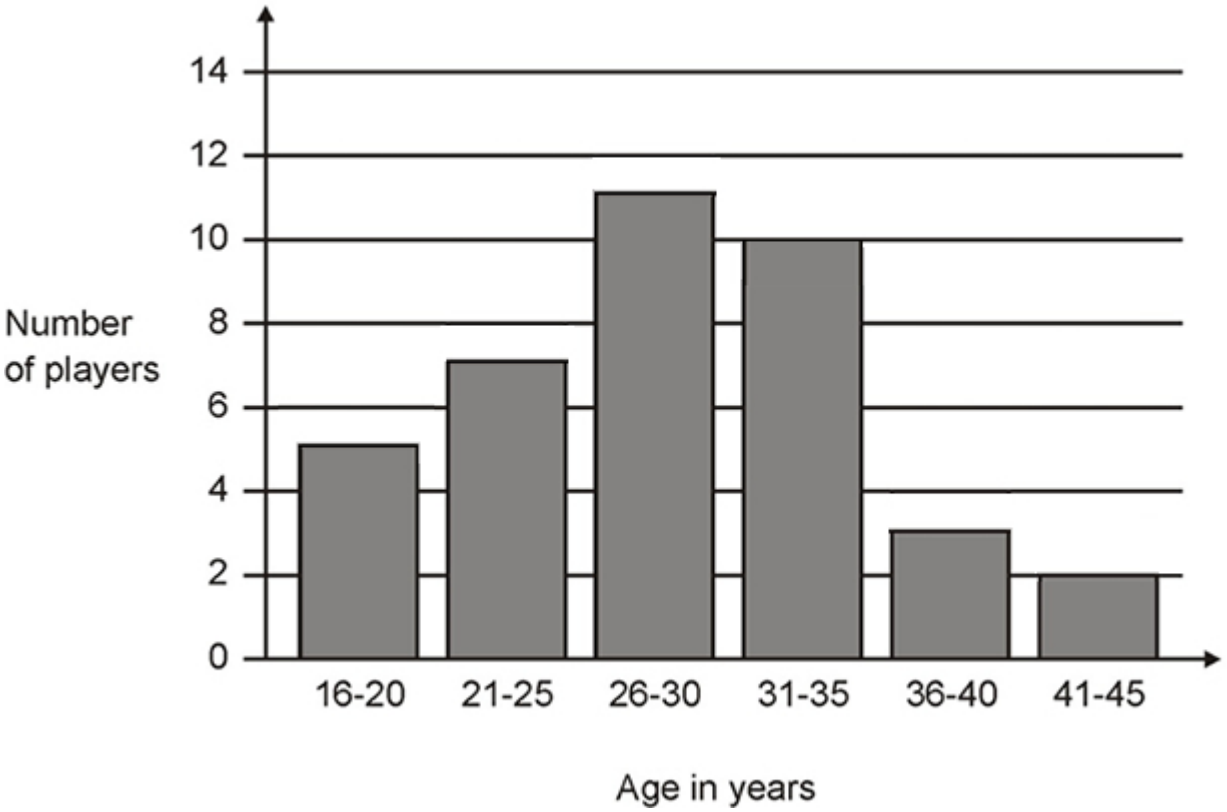
1 mark

Julia arrived at the swimming pool at 4:30pm on a Wednesday.

How long could she stay before closing time?

1 mark

20. This graph shows the age of players at a netball club.



(a) How many players are aged 30 or younger?

1 mark

(b) A player aged 26 and a player aged 29 join the club.

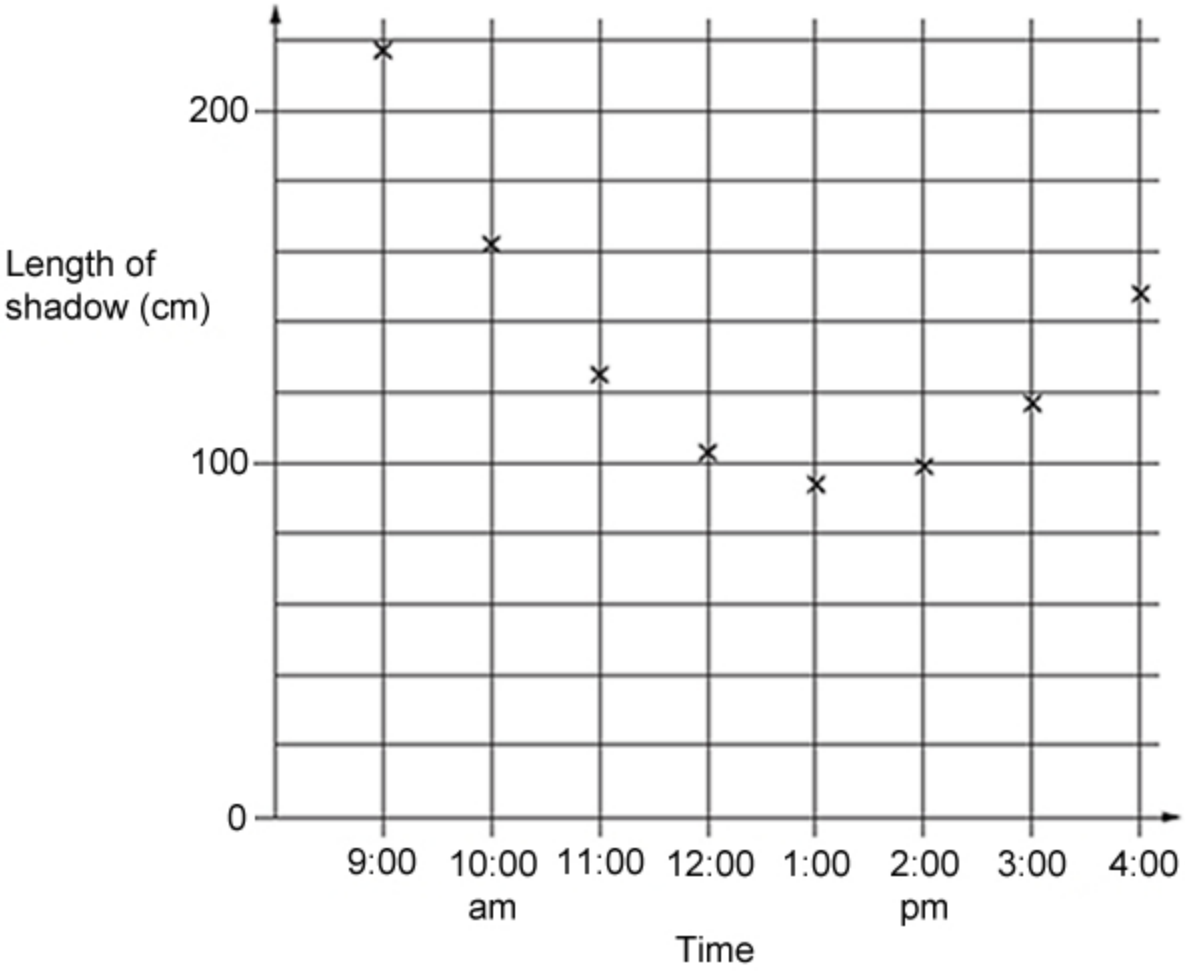
Add this information to the graph above.

1 mark

21. Chloe dug a post into the sand on a beach on one sunny day.

She measured the length of the post's shadow every hour.

She plotted her results on this graph.



Look at the graph.

(a) Estimate the length of the post's shadow at 11:30 am.

cm

1 mark

(b) Estimate a time when the post's shadow was 140 centimetres long.

:

1 mark

22. Here is information about children in a class.

- The total number of children is 30.
- 26 of the children do not ride a bike to school.
- A quarter of the children who do ride a bike to school are boys.
- There are 2 more boys than girls.

Use the information to fill in the missing numbers in the table below.

	Number who **do** ride a bike to school	Number who **do not** ride a bike to school	Total
Number of boys			
Number of girls			
Total			30

2 marks

23. Here is a Carroll diagram for sorting numbers.

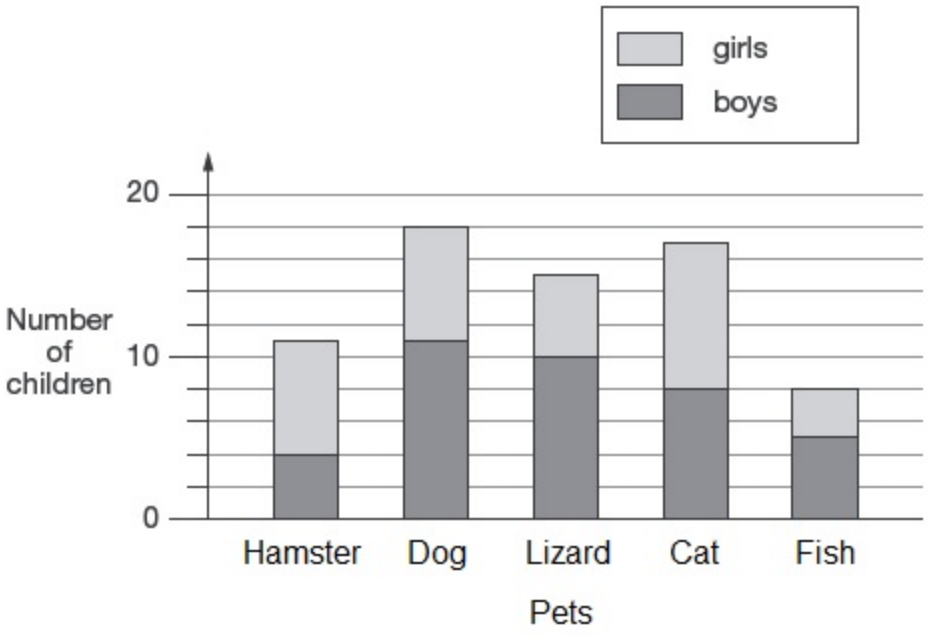
Write these **five** numbers in the correct places on the diagram.

28 **366** **8105** **39** **993**

	odd	**not** odd
a 3-digit number		
not a 3-digit number		

2 marks

24. This chart shows the favourite pets of some boys and girls.



(a) **How many** pets were chosen by more girls than boys?

1 mark

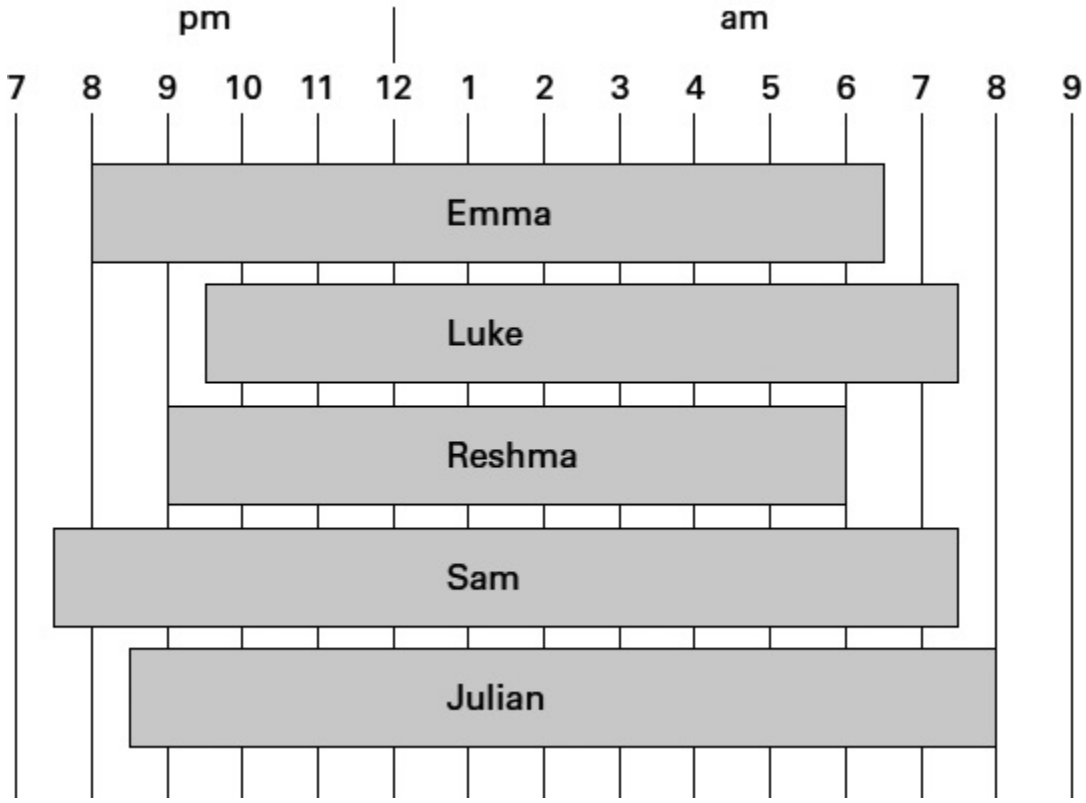
(b) **How many more** boys than girls chose dogs?

1 mark

(c) Which pet was chosen by twice as many boys as girls?

1 mark

25. This chart shows when some children were asleep one night.



For how many hours was Luke asleep?

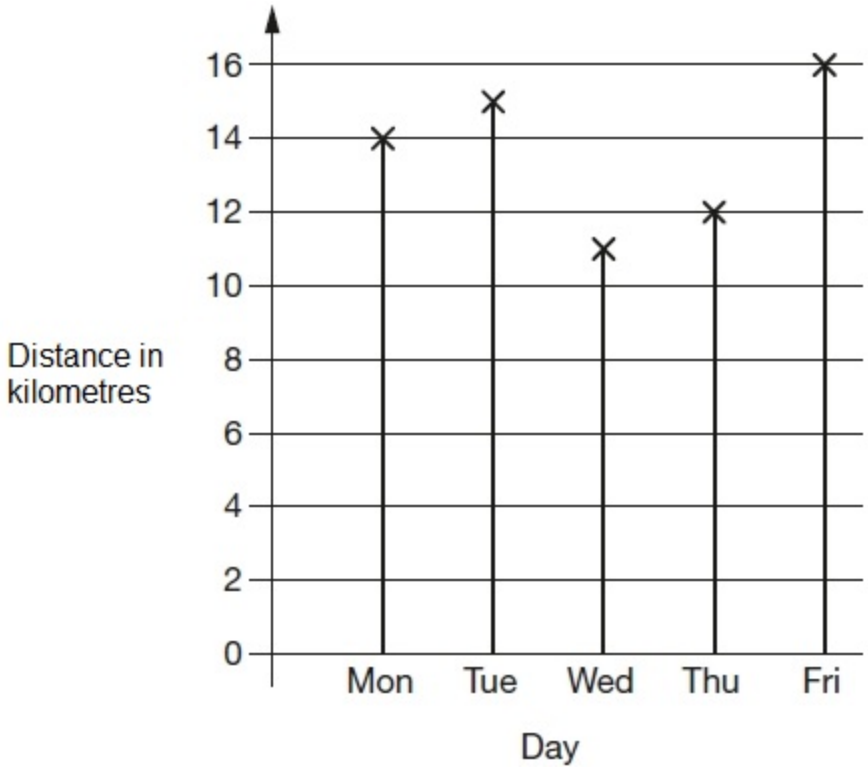
1 mark

How many children woke up after 7am?

1 mark

26. Ash went on a walking holiday in France.

This chart shows how far he walked each day.



(a) How much **further** did Ash walk on Monday than on Wednesday?

km

1 mark

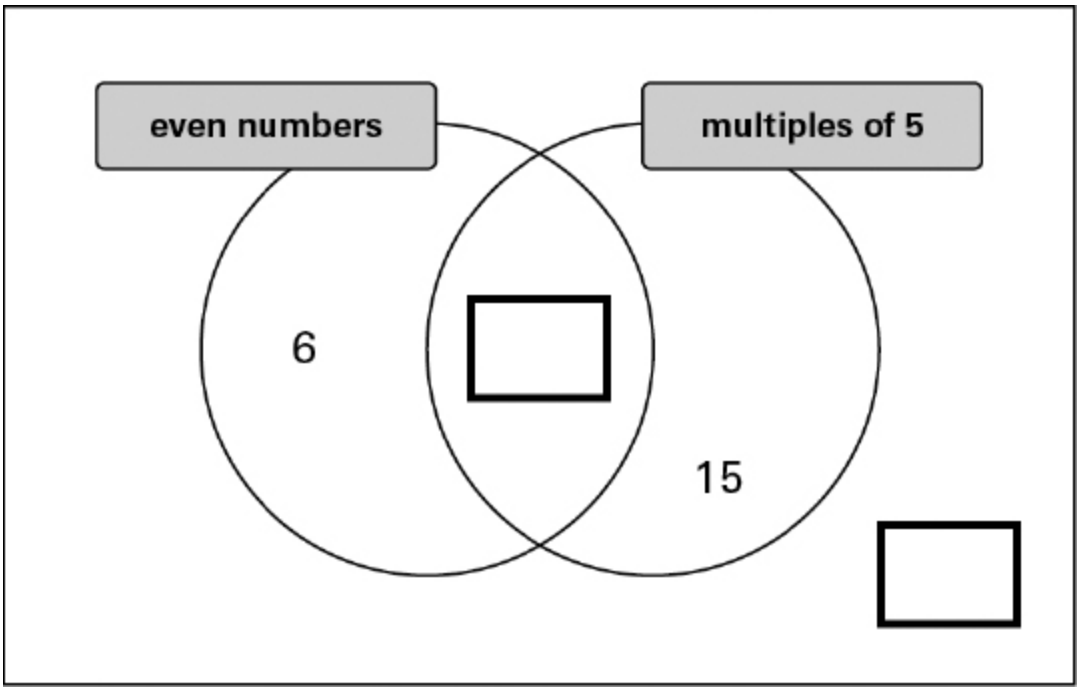
(b) How far did Ash walk **altogether** on the three days he walked the most?

km

1 mark

27. Here is a sorting diagram.

Write a correct number in each of the two boxes.



1 mark

28. The children in Farm School Orchestra each play one instrument.

The table shows how many children play each instrument.

	instrument	number of children
woodwind	recorder	23
	clarinet	4
	flute	5
percussion	drum	1
	piano	2
string	violin	7

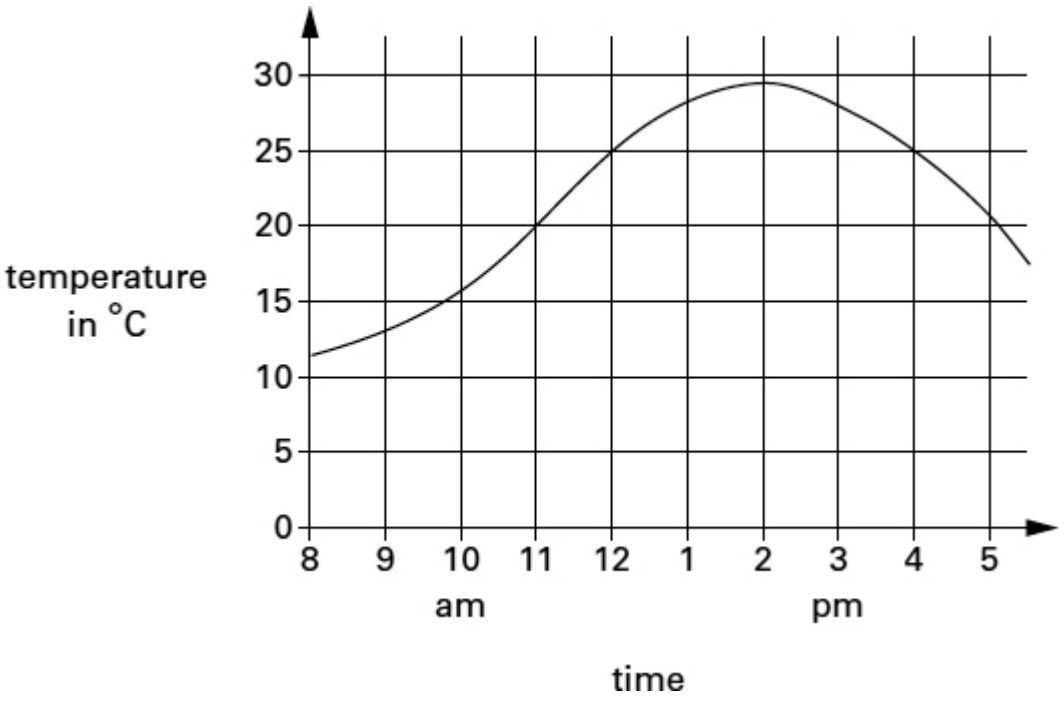
How many **more** children play a recorder than play a violin?

1 mark

How many of the children do **not** play a percussion instrument?

1 mark

29. This graph shows the temperature on a day in July.



What is the temperature at 2pm?

°C

1 mark

Look at the graph?

For how many hours is the temperature **above 25°C**?

hours

1 mark

30. There are **three** classes at Park School.

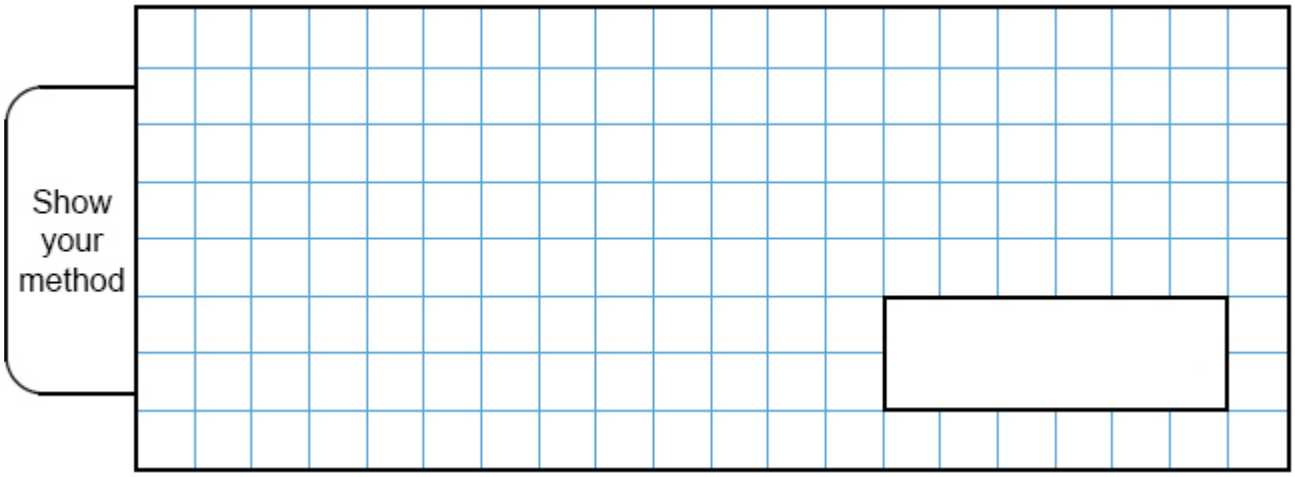
There are **78** children altogether.

Look at the table.

Children at Park School

Class	Number of children
Class 1	23
Class 2	30
Class 3	?

Calculate how many children ate in Class 3



2 marks

31. The table shows the number of visitors to a library during a week.

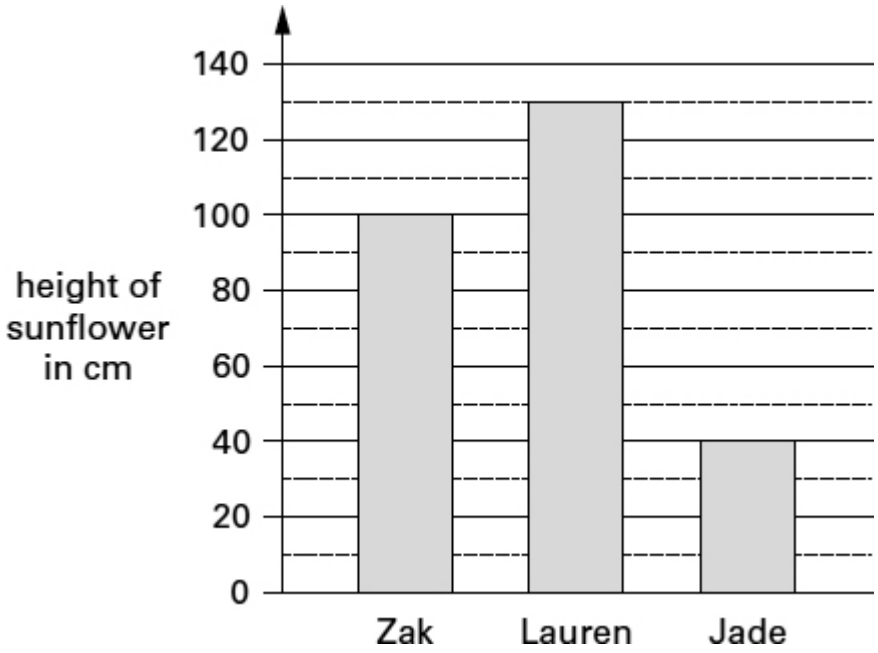
	morning	afternoon
Monday	72	95
Tuesday	55	81
Wednesday	closed	closed
Thursday	93	85
Friday	107	126
Saturday	223	295

How many days had a total of **more than 150** visitors?

1 mark

32. Three children measure the height of their sunflowers.

Here are the results.



How tall is Lauren's sunflower?

cm

1 mark

How much **taller** is Zak's sunflower than Jade's?

cm

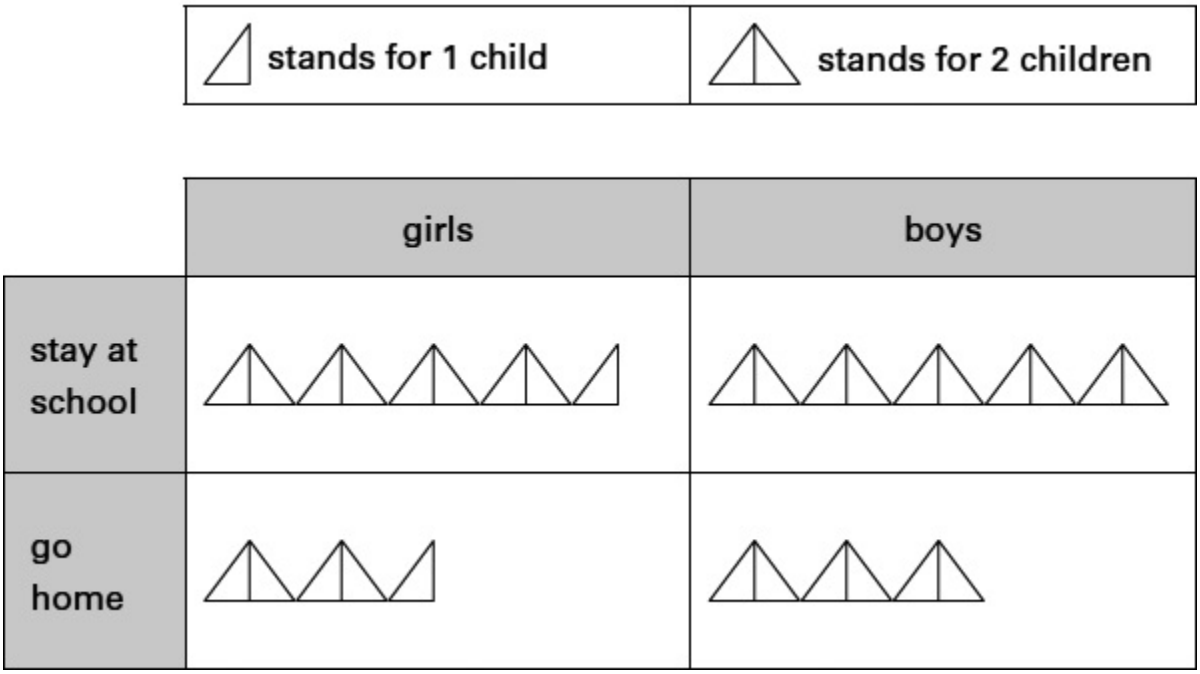
1 mark

33. Jade asked each child in her class,

'Do you stay at school or go home for lunch?'

Here are her results.

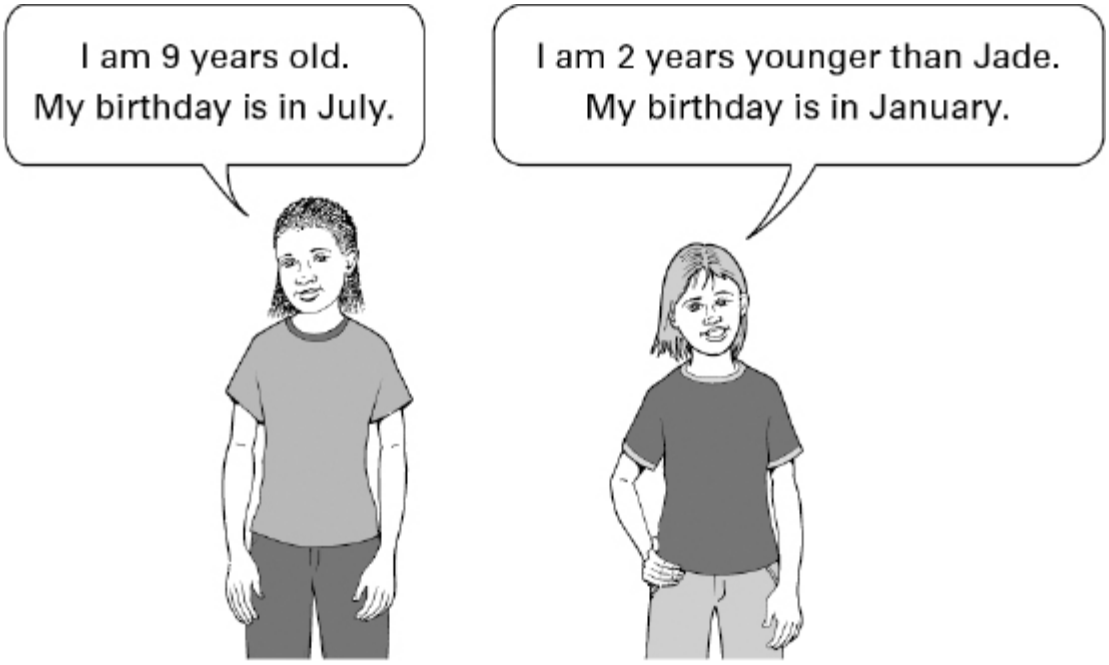
Lunchtime survey



How many **more** girls stay at school than go home for lunch?

1 mark

34.



Write **Jade** and **Lauren** in the correct places on the sorting diagram.

Birthday month

		January to June	July to December
Age	less than 9 years old		
	9 years old		
	more than 9 years old		

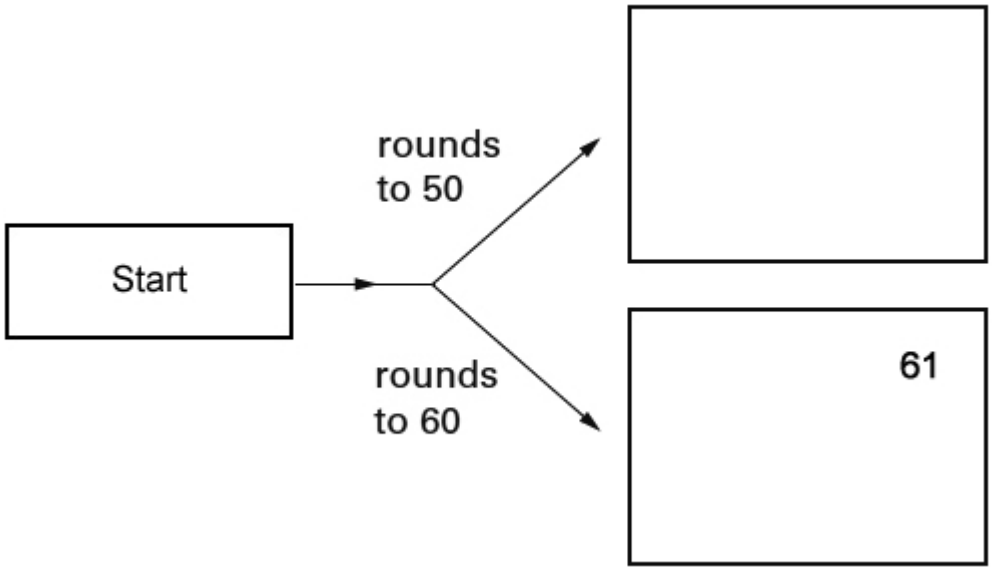
2 marks

35. Here is a diagram for rounding numbers to the **nearest 10**

Write these numbers in the correct boxes.

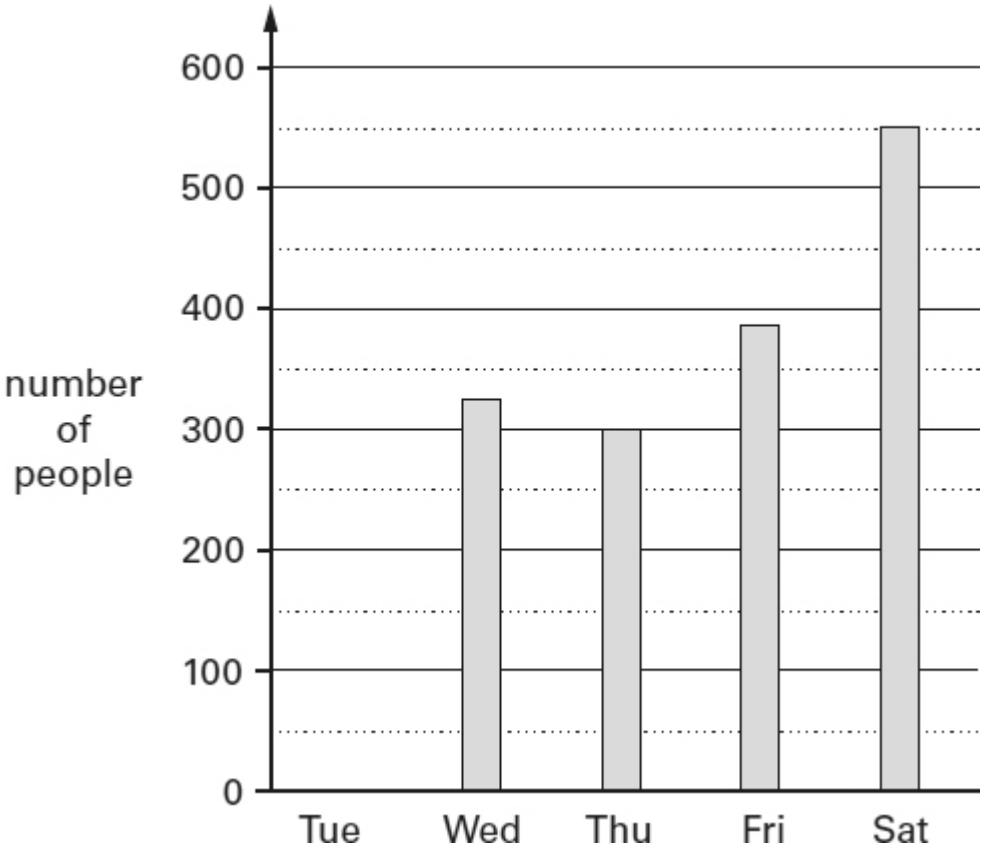
One has been done for you.

~~61~~ 48 59 52



1 mark

36. This graph shows the number of people visiting a shop.



275 people visited on Tuesday.

Draw the missing bar on the graph.

1 mark

Estimate how many **more** people visited the shop on Saturday than Friday.

1 mark

37. Sarah asked all the children in Year 3,

'Did you walk to school today?'

The diagram shows her results.

	boys	girls
walked	19	25
did **not** walk	27	23

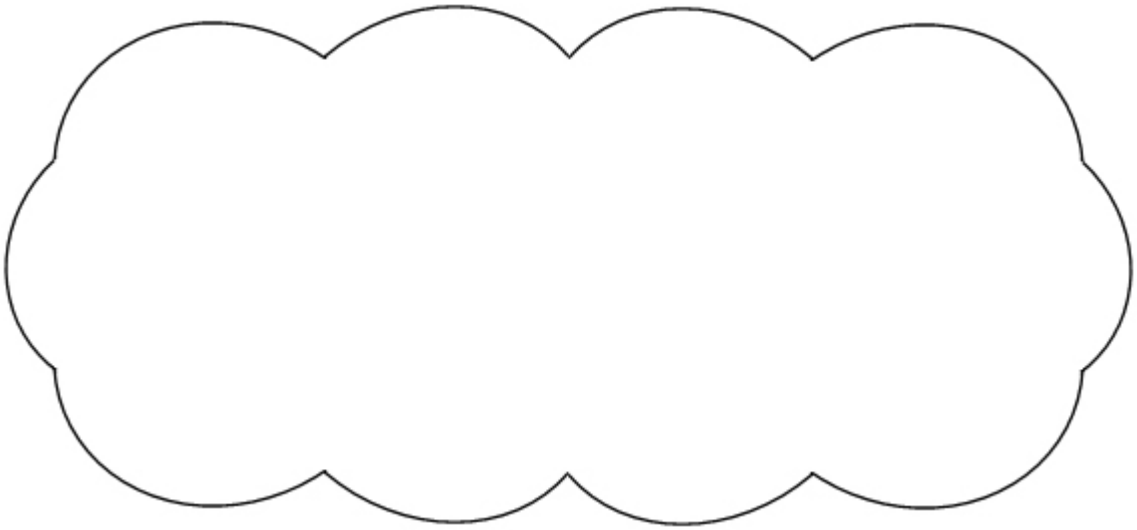
Sarah says,

'More children walked than did not walk'.

Is she correct? Tick (✓) Yes or No.

Yes ☐ No ☐

Explain how you know.



1 mark

38. This chart shows the number of children at a school.

Write in the missing number on the chart.

Class	Boys	Girls	**Total**
A	𝍸 𝍸 |||	𝍸 𝍸 𝍸	28
B	𝍸 𝍸 ||||	𝍸 𝍸 𝍸 ||	31
C	𝍸 𝍸 𝍸	𝍸 𝍸 ||||	29
D	𝍸 𝍸 |||	𝍸 𝍸 ||	

1 mark

In which classes are there more boys than girls?

Class _____ and Class _____

1 mark

39. Vijay has these t-shirts and shorts.

red

yellow

blue

blue

red

He can choose which t-shirt and shorts to wear.
Complete the table to show all the different ways.

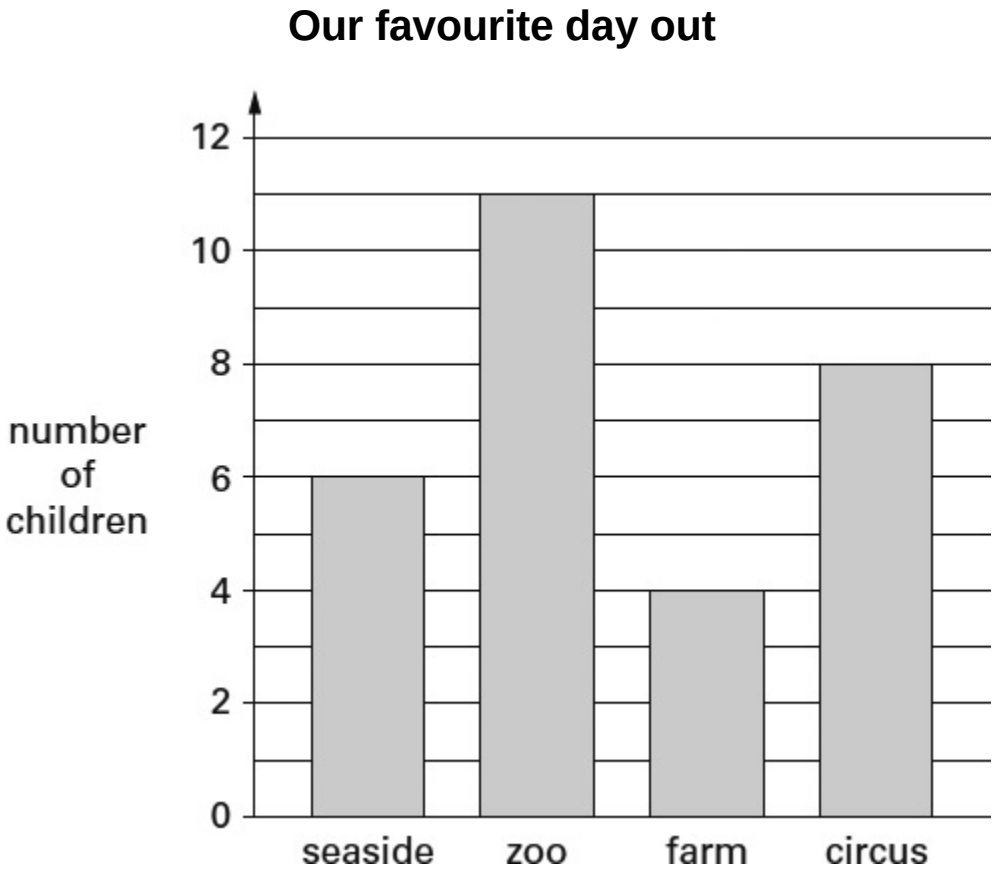
One has been done for you.

t-shirt	shorts
R	**B**

2 marks

40. The children in Vijay's class vote for their favourite day out.

Here are their results.



How many children vote for the zoo?

1 mark

Mark schemes

1. (a) 50

1

(b) 10

1

[2]

2. (a) 28

1

(b) 24

! Parts (a) and (b) transposed but otherwise correct
Mark as 0, 1

1

[2]

3. (a) 10

1

(b) 14

1

(c) 3

1

[3]

4. (a) Horse

! Unambiguous indication
eg, accept
- *Ho*

eg, do not accept
- *H*

1

(b) 5

1

(c) 4

! Four circles drawn
Condone

U1

[3]

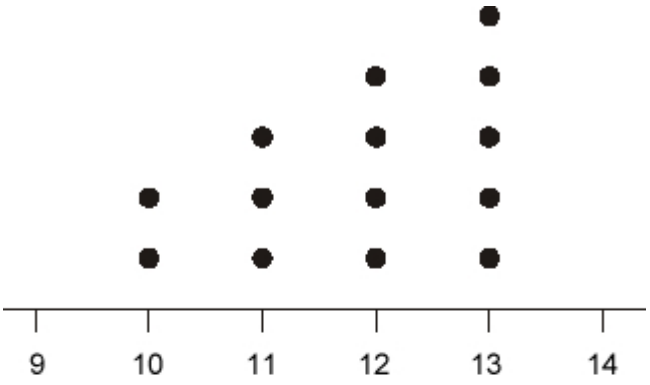
5. (a) 10

1

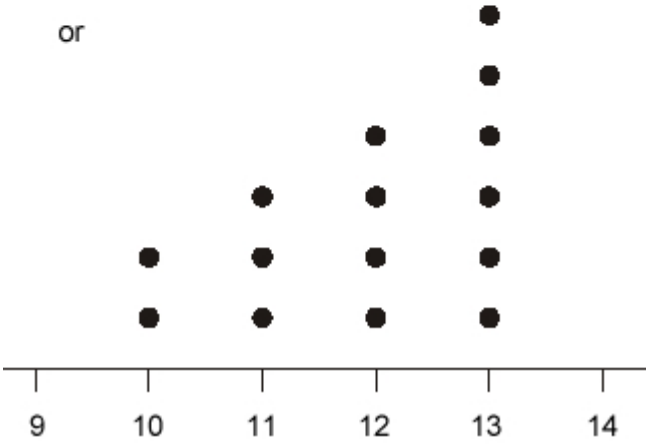
(b) 6

1

(c) Completes the dot plot correctly, ie



or



2

or Completes a dot plot that satisfies at least four of the following six conditions, even if there are other errors

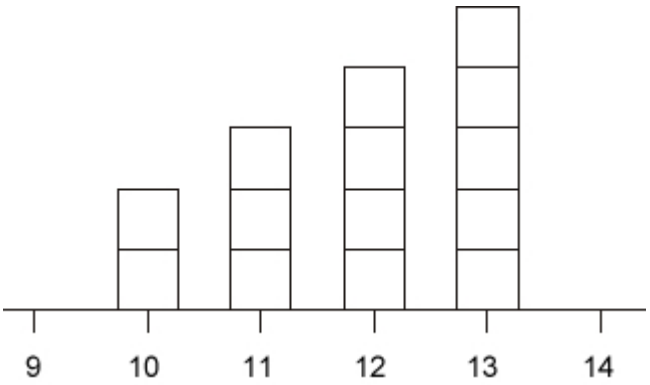
1. There is a total of 14 dots
2. Age 11 has 3 dots
3. Only age 9 and age 14 have no dots
4. Age 13 has the greatest number of dots
5. Age 12 has more dots than age 11
6. Age 10 has at least one dot

or

Shows or implies either set of correct values for the ages, even if the dot plot is incorrect or omitted, eg

- (0), 2, 3, 4, 5, (0)
- (0), 1, 3, 4, 6, (0)

•



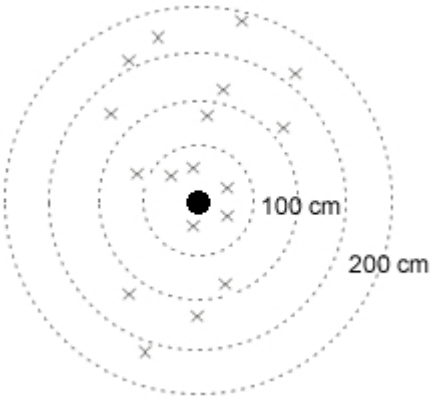
! Symbols not shaded, accurate or grouped in a straight line

For 2m or 1m, Condone provided the number of symbols is unambiguous for each age

1
U2

[4]

6. (a) Indicates only the correct beanbag, ie



! Other beanbags indicated
Ignore marks made on any beanbags inside the 100cm circle as these may have been used for part (b)

Do not accept any other beanbags indicated

1

(b) 8

1

(c) 6

U1

[3]

7. (a) Frank

Accept unambiguous indicationof name, eg
- *F*

Do not accept 54

1

(b) 168

Do not accept Gina

1

[2]

8. (a) 60

1

(b) 2

Accept correct plants indicated, eg
- *C and G*

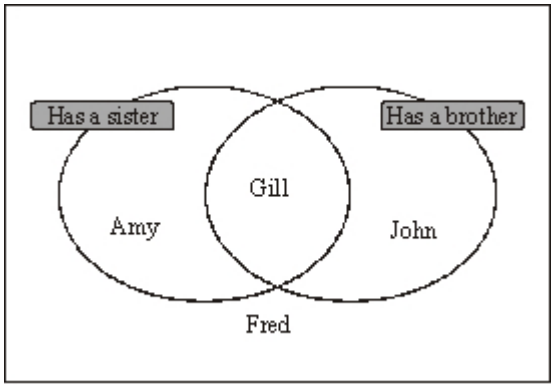
1

(c) 20

1

[3]

9. Places the names John, Gill and Fred in the correct regions, ie



2

or Places any two names in the correct regions

Accept unambiguous indication, eg

- *J, G and F for John, Gill and Fred*

! Name repeated in more than one region

Do not accept as a correctly placed name

! Names on the diagram other than those given

Ignore

! 'Amy' repeated elsewhere on the diagram

Ignore

1

[2]

10. (a) 9

1

(b) 5

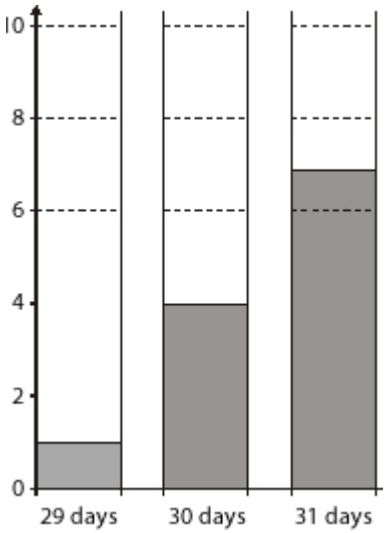
1

(c) 5

1

[3]

11. Completes both bars correctly by showing a frequency of 4 for 30 days and 7 for 31, ie



For 2m, accept bars not shaded, or bars indicated solely by shading with no horizontal lines

! Bar not of correct width, or not ruled/accurate
Accept provided the pupil's intention is clear and the height of the bar is within 2mm of the correct height

2

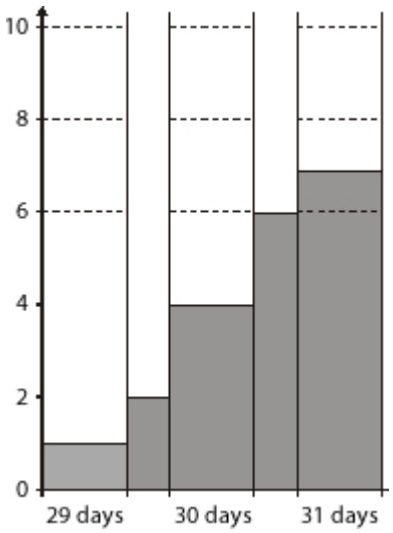
or Completes one bar correctly

or

Indicates the correct values 4 and 7 using the vertical scale of the chart, even if the bars are incorrectly shaded or aligned

! Additional bars indicated
For 2m or 1m, accept only if unambiguous eg, do not accept

•



1

[2]

12. (a) 18

1

(b) Indicates the correct drawing, ie

	✓

1

[2]

13. (a) 2

Do not *accept a list of names.*

1

(b) Laura

Accept unambiguous abbreviations or recognisable misspellings.
Accept 8

1
U1

[2]

14. (a) Award **ONE** mark for rounding all four numbers correctly, ie

300

600

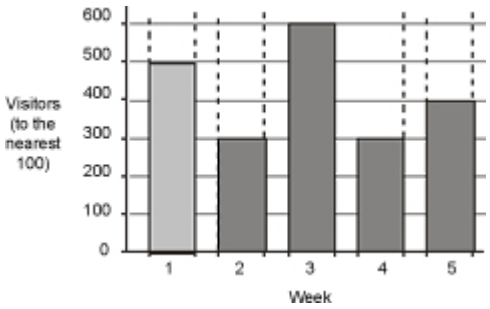
300

400

If part (a) is omitted, but part (b) is completed correctly with rounded values, award the mark for part (a)

1

(b) Award TWO marks for completing all four bars correctly, ie



2

If the answer is incorrect, award ONE mark for

- Completing at least two bars correctly

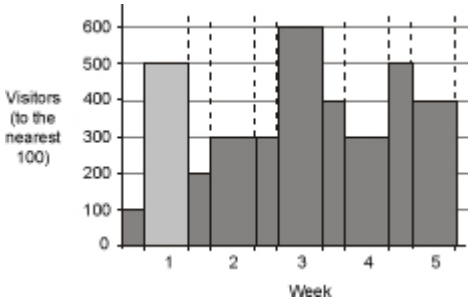
OR

- Completing at least two bars correctly using the given values from the table in part (a)

For 2m or 1m:

- *accept bars not shaded*
- *accept correct bars using their (non-zero) answers from the table in part (a) provided the pupil's intention is clear*
- *accept bars of incorrect width, or not ruled/accurate provided the pupil's intention is clear, and the heights of the bars are clear*

***Do not** accept additional bars indicated, eg*

- 

1

[3]

15. (a) 38.5 or equivalent

1

(b) Indicates the point (16, 36.7) on the graph correctly

Accept: unambiguous indication, eg

- *Correct point indicated by the top of a vertical line and/or the end of a horizontal line*

Accept inaccurate indication provided the point marked is closer to (16, 36.7) than any other grid intersection

Accept point joined to the rest of the graph, even if incorrect or using a solid line or joined to the x- or y-axis with a line

1

[2]

16. (a) Belfast

Accept: unambiguous indication, eg

- *B*

1

(b) 10

1

(c) 5:50

Accept: indication of am repeated, eg

- *5:50 am*
- *05:50*

1

[3]

17. (a) 3

1

(b) Supermarket C

1

(c) Supermarket A

1

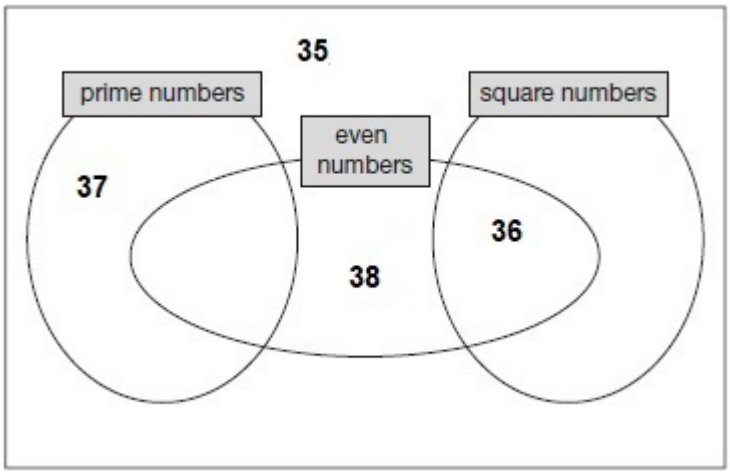
Accept: unambiguous indication

eg, for part (b)

- *C*

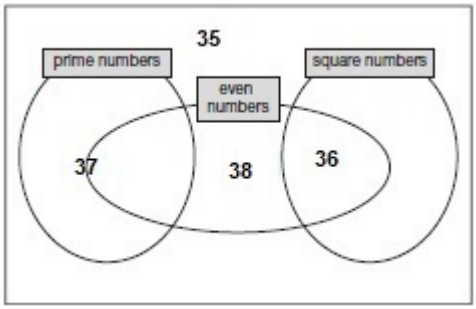
[3]

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

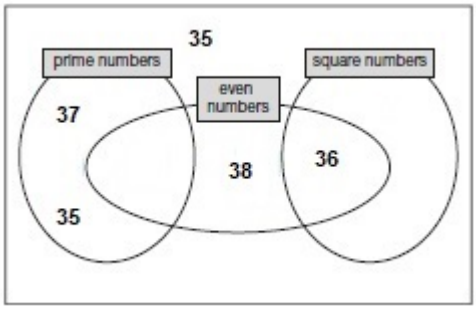


If the answer is incorrect, award **ONE** mark for three numbers placed correctly.

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]

19. (a) 9 hours

The answer is a time interval

1

(b) 2 hours

The answer is a time interval

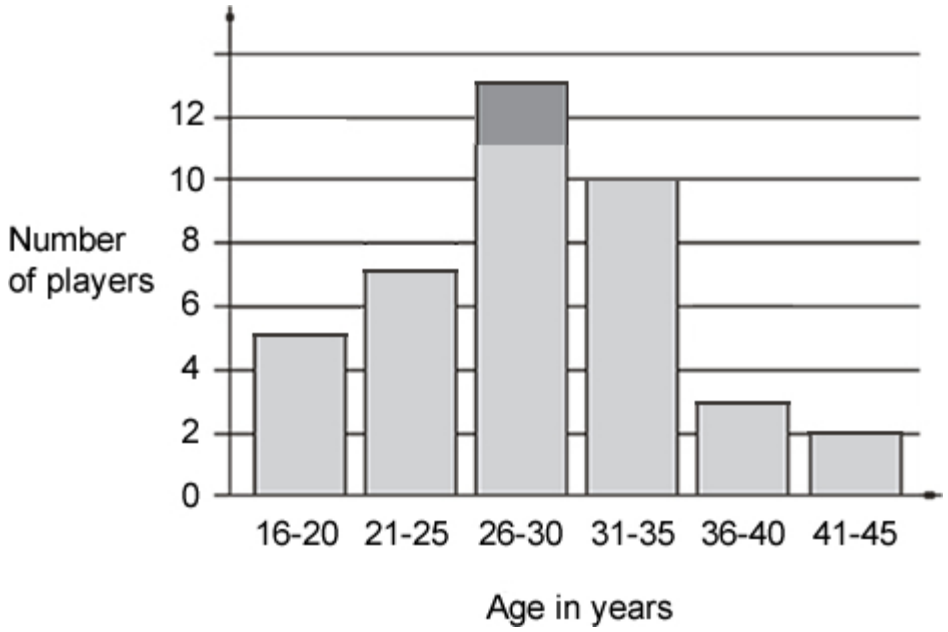
1

[2]

20. (a) 23

1

(b) Graph completed as shown:



Accept slight inaccuracies in drawing provided the intention is clear.
Bar need not be shaded.

1

[2]

21. (a) Answer in the range 103 cm inclusive to 117 cm exclusive

1

(b) Answer in the range 10:30 am to 10:50 am inclusive (or) in the range 3:35 pm to 3:55 pm inclusive

1

[2]

22. Completes all 8 entries of the table correctly, i.e.

	... **do** ride a bike to school	... **do not** ride a bike to school	Total
... boys	1	15	16
... girls	3	11	14
Total	4	26	**30**

2

or

Completes at least four entries correctly

1
U2

[2]

23. Award **TWO** marks for the table completed as shown:

	odd	**not** odd
a 3-digit number	**993**	**366**
not a 3-digit number	**8105 39**	**28**

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

Do not *accept numbers written in more than one section.*

Up to 2

[2]

24. (a) 2
Do not *accept dog and cat.*

1

(b) 4

1

(c) Lizard
Accept unambiguous abbreviations or recognisable misspellings.

1

[3]

25. (a) 10

Accept answers between 9 hours 45 mins and 10 hours 15 mins exclusive.

1

(b) 3

Accept a list of names, Luke, Sam, Julian.

1

[2]

26. (a) 3

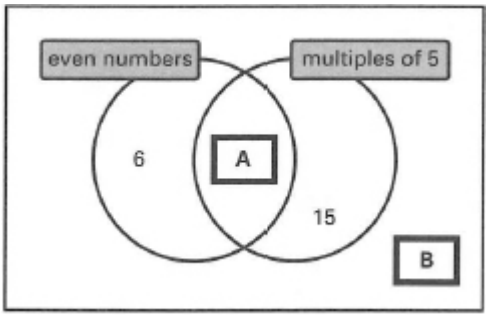
1

(b) 45

1

[2]

27. Boxes completed as shown:



Box A: any multiple of 10, eg 10, 50, 120

AND

Box B: any number ending in a 1, 3, 7 or 9

Both *answers must be correct for the award of the mark.*
If answers are written in the answer boxes, disregard any additional numbers written elsewhere on the diagram.
If no answers are written in the answer boxes, accept correct answers written in the relevant two regions of the diagram provided that all numbers written in the two regions are correct.

[1]

28. (a) 16

1

(b) 39

1

[2]

29. (a) Answer in the range 29°C to 29.9°C inclusive.

1

(b) 4

1

[2]

30. Award **TWO** marks for the correct answer of 25

If both marks are awarded, record by entering 1 in each marking space.

If the answer is incorrect, award **ONE** mark for evidence of appropriate working, eg:
23 + 30 = 53
78 - 53 = wrong answer

*The working must be carried through to reach an answer for the award of **ONE** mark.*
*Award **ONE** mark by entering 1, 0 in the marking spaces.*

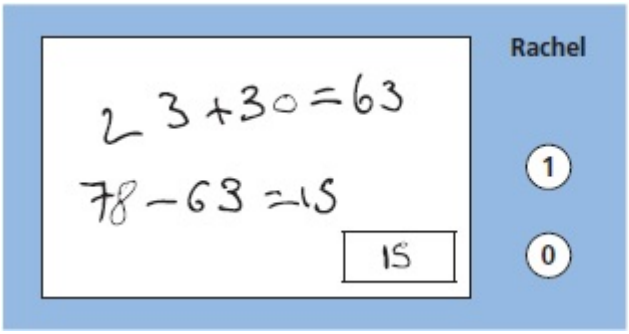
Up to 2m

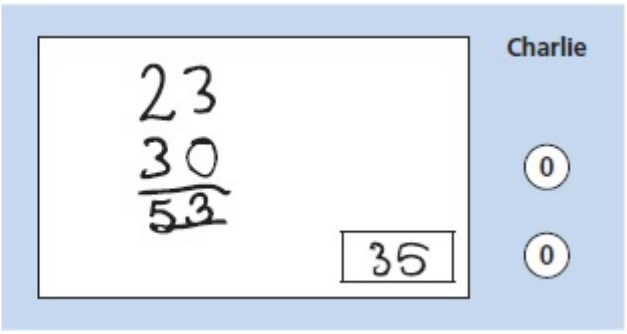
[2]

Example responses

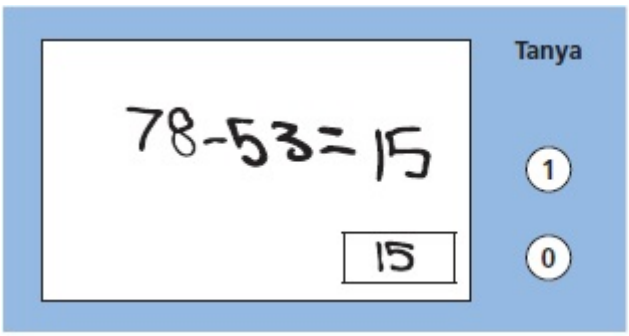
1 mark	0 marks

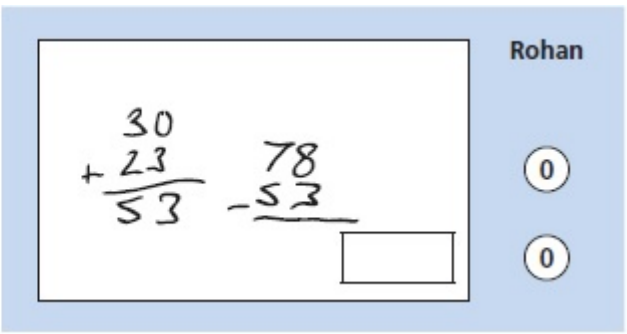
Rachel has identifi ed that she needs to add together the number of children in Class 1 and Class 2, and then subtract her answer from the total number of children in the school. Although she made an arithmetic error in the fi rst of these calculations, she has recorded a complete and correct method so can be awarded one mark. Charlie has also added together the number of children in Class 1 and Class 2. However, he has not recorded any further working. While it is possible that his answer of 35 was found by attempting to work out 78 – 53, this cannot be assumed. Therefore his method is incomplete and cannot be awarded one mark.



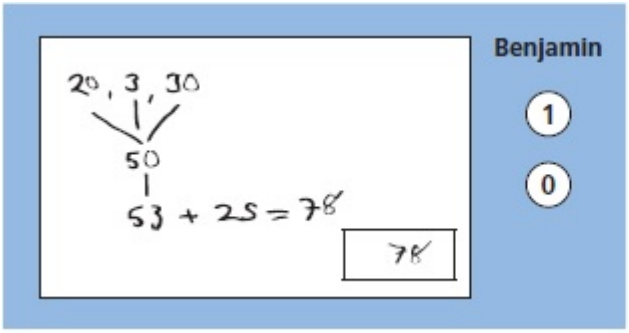


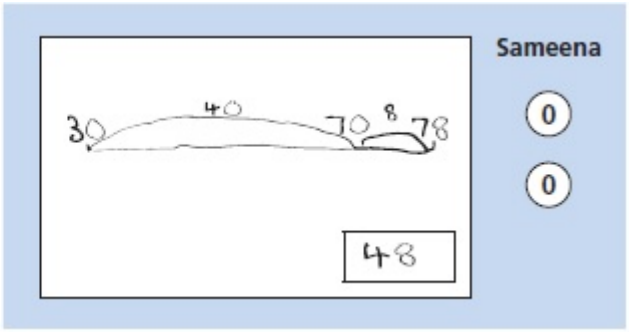
Tanya has not recorded the addition of 23 and 30, but we can assume that she has done this since she recorded the correct answer 53 in her subsequent subtraction. She made an arithmetic error when subtracting 53 from 78, and reached an incorrect fi nal answer. However, she can be awarded one mark since we can assume from her working that she used a complete and viable method. Rohan has recorded a correct method. However, an answer is required for the award of the working mark in the non-calculator paper. Therefore, without an answer, Rohan cannot be awarded one mark.





Benjamin has recorded a complete and correct method, without any errors. However, he has copied the wrong number from his fi nal calculation into the answer box, resulting in an incorrect fi nal answer. While he cannot be awarded both marks for a correct answer, he can be awarded one mark for a complete and correct method. Sameena has used a number line to count up to 78. However, she failed to total the two classes fi rst, and instead counted up from 30, the number of children in Class 2. Therefore her working is not correct and she cannot be awarded one mark.





31. 4

Accept a correct list of days, ie Monday, Thursday, Friday, Saturday.

[1]

32. (a) 130

Accept 1m 30cm

1

(b) 60

1

[2]

33. 4

[1]

34. (a) 'Jade' written in the correct place in the sorting diagram.

1

(b) 'Lauren' written in the correct place on the sorting diagram.

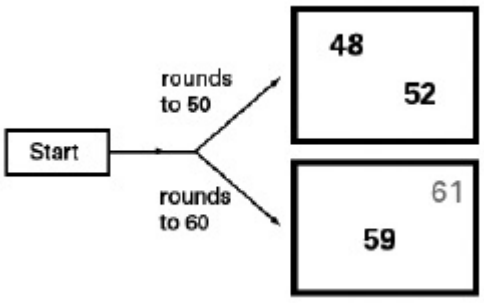
1

	January to June	July to December
less than 9 years old	**Lauren**	
9 years old		**Jade**
more than 9 years old		

Do not *accept a child's age or month of birth written in place of their name, eg 9 or January.*
Do not *accept a name written in more than one box.*
Accept recognisable misspellings and abbreviations.

[2]

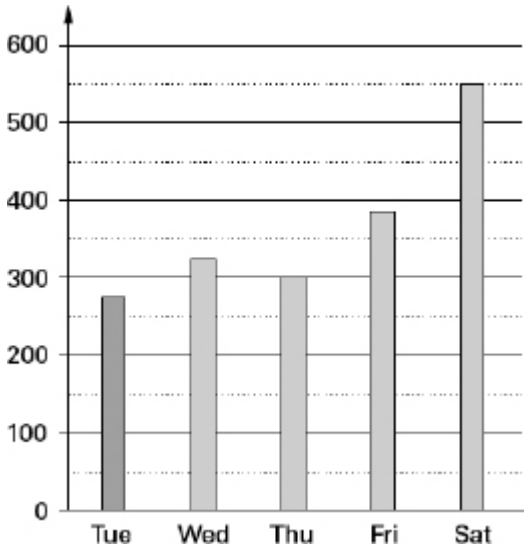
35. Sorting diagram completed as shown:



All three *numbers must be correct for the award of the mark.*
Disregard any additional numbers written on the diagram.

[1]

36. (a) Bar for Tuesday drawn on graph as shown:



Bar should be closer to 275 than to 250 or 300 for the award of the mark, ie accept bar length between 42mm and 46mm inclusive.
Accept slight inaccuracies in drawing, eg width of bar, provided the intention is clear.

1

(b) Answer in the range 155 to 175 inclusive.

1

[2]

37. An explanation which shows that the number of children who did **not** walk to school is more than the number of children who walked, eg:

- '44 children walked which is fewer than the number who did not walk'
- '6 more children did not walk than walked'
- '19 and 25 added is less than 27 and 23 added, so more children did not walk'
- '27 + 23 = 50 and 19 + 25 = 44'
- 'The total for the bottom two boxes is greater than the total for the top two boxes'

Do not *award the mark for circling 'No' alone.*
If 'Yes' is circled but a correct unambiguous explanation is given, then award the mark.
Accept one or more calculation errors provided that the correct pair of numbers have been added together, eg 27 + 23 = 40 and 19 + 25 = 44
Do not *accept vague or arbitrary explanations, eg:*

- *'On the results, you can see more children walked than did not walk'*
- *'Because the diagram says so'*
- *'Because 25 is greater than 23'*

U1

[1]

38. (a) Chart completed as shown:

Class	Boys	Girls	Total
A	𝍸 𝍸 III	𝍸 𝍸 𝍸	28
B	𝍸 𝍸 IIII	𝍸 𝍸 𝍸 II	31
C	𝍸 𝍸 𝍸	𝍸 𝍸 IIII	29
D	𝍸 𝍸 III	𝍸 𝍸 II	**25**

Accept alternative unambiguous indications, eg correct answer written elsewhere on page.

1

(b) **C** and **D**

Both *letters must be correct for the award of the mark.*
Letters may be given in either order.
Accept unambiguous indications on the chart.

1

[2]

39. Award **TWO** marks for all five remaining combinations of t-shirts and shorts.

t-shirt	shorts
R	B
R	R
Y	B
Y	R
B	B
B	R

Accept any combinations listed in any order.
Accept colours written in full on table.
If both marks are awarded, record by entering 1 in each marking space.

If the answer is incorrect, award **ONE** mark for four different correct combinations.
*Award **ONE** mark by entering 1, 0 in the marking spaces.*

Up to 2m
U1

[2]

40. 11

[1]