1 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 |
| :---: | :---: |
| $12: 01$ | $15: 22$ |
| $12: 25$ | $15: 56$ |
| $13: 31$ | $16: 53$ |
| $14: 01$ | $17: 26$ |
| $14: 31$ | $17: 53$ |
| $15: 31$ | $18: 53$ |
| $16: 01$ | $19: 20$ |

2 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?


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?


One morning, the 10:35 bus from Winton gets to Carston 3 minutes early.
What time does it get to Carston?


3 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 $7: 59 \mathrm{am}$ | 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 $\mathbf{8}$ am or later?


Amy says,
'Two-thirds of the 150 people in the survey get up before 9 am.'
Amy is correct.
Explain how you know.


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?


Tina's birthday is on September 9th.
On what day of the week was her birthday in 1998?


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


Sasha pays $£ 3.00$ to hire a motor boat.
She goes out at 3:20pm.
By what time must she return?


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?
$\qquad$

Explain how you know.


| Car Park charges |  |
| :---: | :---: |
| Time | Charge |
| up to 1 hour | $20 p$ |
| 1 to 2 hours | 50 p |
| 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 $\mathbf{1 . 2 0} \mathbf{~ p m}$.
How much does she pay?


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.


This table shows when flights take off at an airport.

| Flight number | Destination | Take-off time $\mathbf{Z}$ |
| :--- | :--- | :---: |
| 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 3 pm and 5 pm ?


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?



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?


10 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?



Helen is 10 years 9 months old.
How much will it cost Helen to visit?


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".


How much will it cost for 18 children (under 11) to visit the castle?
You must show your working.


There are 90 children in Year 6 at Woodland Junior School.
They are split into three classes.

| Class | Number in class |
| :---: | :---: |
| $\mathbf{6 M}$ | 27 |
| $\mathbf{6 P}$ | 33 |
| $\mathbf{6 T}$ | 30 |

Each child chose football or netball or hockey.
In 6M, 13 children chose hockey.
The rest of the class were split equally between football and netball.
In 6P, 9 children chose netball.
Twice as many children chose football as chose hockey.
In 6 T , the ratio of children who chose
football to netball to hockey was 1:2:3
Complete this table.

| Class | Number in class | Football | Netball | Hockey |
| :---: | :---: | :---: | :---: | :---: |
| 6M | 27 |  |  | 13 |
| 6P | 33 |  | 9 |  |
| 6T | 30 |  |  |  |

13
Archery is an Olympic sport.


In 2008, two archers called Park and Zhang were in the women's final.

Both archers shot 12 arrows.

Zhang won the final by 1 point.

Complete the table for Zhang below.
You can use the space to show your calculations.


| Name of archer: Park |  |
| :---: | :---: |
| What she scored <br> with her 12 arrows |  |
| Number of <br> points | Frequency |
| 7 | 0 |
| 8 | 4 |
| 9 | 3 |
| 10 | 5 |


| Name of archer: Zhang |  |
| :---: | :---: |
| What she scored <br> with her 12 arrows |  |
| Number of <br> points | Frequency |
| 7 | 1 |
| 8 | 0 |
| 9 |  |
| 10 |  |

14 Tom collects information about how long the phone calls are in his house.


He makes a frequency table using class intervals of 30 seconds.

Here is part of the table.

| length of call in secs | $0-29$ | $30-59$ | $60-89$ | $90-119$ |
| :--- | :---: | :---: | :---: | :---: |
| number of calls | 3 | 25 | 35 | 19 |

The longest call was 175 seconds.
Which class interval does this fit into?


Altogether he recorded 91 calls.
Tom makes a rough estimate that half the calls lasted less than 75 secs.
Explain how he could make this estimate.


15 In a survey of children's favourite fruit juices, these were the results.

| Juice | Apple | Orange | Grape | Mango |
| :---: | :---: | :---: | :---: | :---: |
| Percentage <br> of children | $25 \%$ | $14 \%$ | $30 \%$ | $31 \%$ |

(a) $\mathbf{2 0}$ more children chose grape than chose apple.

How many children took part in the survey?

(b) Chen makes a pie chart to show the results.

What angle should he use for the children who chose mango?


16 Here is a table of temperatures at dawn on the same day.

| Temperatures ${ }^{\circ} \mathrm{C}$ |  |
| :--- | ---: |
| London | $-4^{\circ} \mathrm{C}$ |
| Moscow | $-6^{\circ} \mathrm{C}$ |
| New York | $-9^{\circ} \mathrm{C}$ |
| Paris | $+6^{\circ} \mathrm{C}$ |
| Sydney | $+14^{\circ} \mathrm{C}$ |

What is the difference in temperature between London and Paris?


1 mark
At noon the temperature in New York has risen by $5^{\circ} \mathrm{C}$.
What is the temperature in New York at noon?


17 On Monday all the children at Grange School each play one sport.
They choose either hockey or rounders.


There are $\mathbf{1 0 3}$ children altogether in the school.
27 girls choose hockey.
Write all this information in the table.
Then complete the table.

|  | hockey | rounders | Total |
| :---: | :---: | :---: | :---: |
| boys | 22 |  |  |
| girls |  |  | 53 |
| Total |  |  |  |

18 This table shows the number of things to eat in five children's lunch boxes.

|  | sandwiches | apples | bananas | fruit bars |
| :---: | :---: | :---: | :---: | :---: |
| Lisa | 1 | 2 | 0 | 2 |
| Jack | 2 | 0 | 2 | 1 |
| Kemi | 1 | 1 | 0 | 2 |
| Nik | 1 | 2 | 1 | 0 |
| Ben | 2 | 1 | 2 | 1 |

Here is a graph of the information for four of the children.


Which child's information is missing from the graph?


Explain how you know.


19 Here is information about pupils in a class.

- The total number of pupils is 30
- 26 of the pupils do not wear glasses.
- A quarter of the pupils who do wear glasses 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 <br> wear glasses | Number who do not <br> wear glasses | Total |
| :---: | :---: | :---: | :---: |
| Number <br> of boys |  |  |  |
| Number <br> of girls |  |  |  |
| Total |  |  | 30 |


|  |  |  |  |  | e |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 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.


James goes from Newcastle to Birmingham, and then on to Cardiff.
How many kilometres does he travel?



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?


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

