1. 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?


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?


1 mark
2. This weather chart shows the highest and lowest temperatures in a town on five days in March.

|  | Temperature ${ }^{\circ} \mathrm{C}$ |  |
| :--- | :---: | :---: |
|  | 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?
$\qquad$
1 mark
What is the difference between the lowest temperatures on Thursday and Friday?


1 mark
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 |
| $7: 00 \mathrm{am}$ to $7: 59 \mathrm{am}$ | 28 |
| $8: 00 \mathrm{am}$ to $8: 59 \mathrm{am}$ | 59 |
| $9: 00 \mathrm{am}$ to $9: 59 \mathrm{am}$ | 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.

4. 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 |

5. 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.

6. 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.


1 mark
7. 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?
8. 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 6T, 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 |  |  |  |

9. On Monday all the children at Grange School each play one sport.

They choose either hockey or rounders.


There are 103 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 |  |  |  |

1. (a) 38

> The answer is a time interval.
(b) $10: 21$

The answer is a specific time.

1

1
[3]
2. Wednesday

Accept unambiguous abbreviations or recognisable misspellings.
1

6

## Do not accept -6

3. (a) 109
(b) An explanation that recognises that 100 people get up before 9 am which is two-thirds of the total (150).

- ' $13+28+59=100$ which is two-thirds of the total'
- $\cdot \frac{1}{3}$ of $150=50$ and $2 \times 50=100$ '
- $\cdot \frac{2}{3}$ 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.'
- ' $13+28+59=100$ '

4. Completes all 8 entries of the table correctly, ie

|  | $\ldots$ do wear <br> glasses | $\ldots$ do not <br> wear glasses | Total |
| :---: | :---: | :---: | :---: |
| $\ldots$ boys | 1 | 15 | 16 |
| $\ldots$ girls | 3 | 11 | 14 |
| Total | 4 | 26 | 30 |

or
Completes at least four entries correctly
5. Indicates Nik and gives a correct explanation
eg

- 1 sandwich, 2 apples and 1 banana is missing from the graph and that is what Nik had in his lunch box
- The graph shows the correct number of fruit bars and Nik is the only one who does not have a fruit bar in his lunch box so his must be the missing one
- The totals from the table are $7,6,5,6$, and from the graph $6,4,4,6$, and the difference is Nik

Accept minimally acceptable explanation
eg

- 1 sandwich, 2 apples, 1 banana
- Because the number of fruit bars is correct
- 1 banana missing
- 7, 6, 5, 6 and 6, 4, 4, 6 seen

Do not accept incorrect or incomplete explanation
eg

- 1 sandwich, 2 apples
- There are 6 fruit bars
- 2 apples are missing

6. 

(a) 150-179 Accept 6th OR sixth (interval).
(b) Explanation that refers to the fact that the 'middle length call' is the 46th in size AND this comes in the middle of the $60-89$ secs. group AND the middle of the range 60-89 is 75 , eg

- "Because 63 of the calls took less than 90 seconds so about 45 took less than 75 sec ."

7. (a) 10

$$
\text { Accept }+10 \text { OR -10 }
$$

Do not accept an incomplete calculation, eg: 4 + 6

1
(b) $\quad-4$

> Accept 'negative 4' OR 'minus 4' OR '4 below'.
> Do not accept '4-'.
8. Completes all 7 entries in the table correctly, ie:

|  | No. | Football | Netball | Hockey |
| :---: | :---: | :---: | :---: | :---: |
| 6 M | 27 | $\mathbf{7}$ | $\mathbf{7}$ | 13 |
| 6 P | 33 | $\mathbf{1 6}$ | 9 | $\mathbf{8}$ |
| $6 T$ | 30 | $\mathbf{5}$ | $\mathbf{1 0}$ | $\mathbf{1 5}$ |

or
Completes the first two rows (6M \& 6P) correctly

## OR

Completes the third row (6T) correctly
9. Award TWO marks for all seven boxes completed correctly as shown:

|  | hockey | rounders | Total |
| :---: | :---: | :---: | :---: |
| boys | 22 | 28 | 50 |
| girls | 27 | 26 | 53 |
| Total | 49 | 54 | 103 |

If the answer is incorrect, award ONE mark for five or six boxes completed correctly.

