Name:

Maths Assessment Year 4 Term 2: Statistics

1. Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.

2. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

Name: Date:

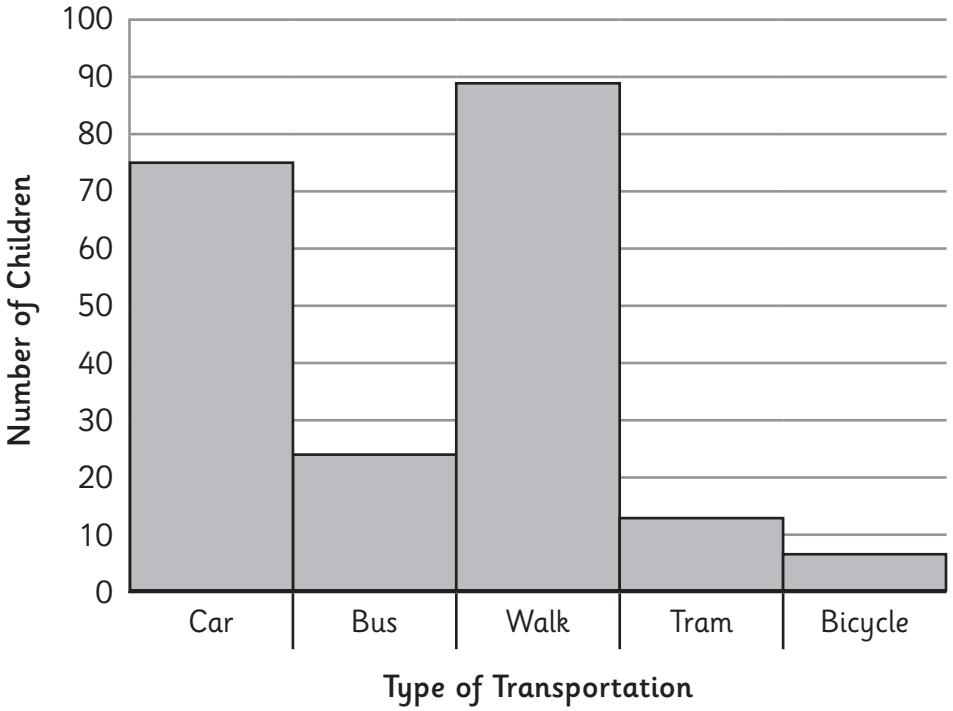
20 total marks

Maths Assessment Year 4 Term 2: Statistics

i. Interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.

ii. Solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.

1. Here is a bar chart showing how children in a school got to school on one day:



a) How many children caught public transport to school?

1 mark

b) How many more children walked to school rather than came by car?

1 mark

c) If 12 children were away, how many children are in the school?

1 mark

Total for this page

2. Year 4 collected information about children's pets in the school:

Pet	Number of animals
Dog	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||
Cat	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||
Fish	𝍸 𝍸 |||
Rabbit	𝍸 𝍸 𝍸 𝍸 𝍸
Hamster	𝍸 𝍸 𝍸 ||
Gerbil	𝍸 𝍸 |

a) Use the data to draw a bar chart on the grid below. Make sure you label the axes, give the chart a title and choose a suitable scale for the axes.

6 marks

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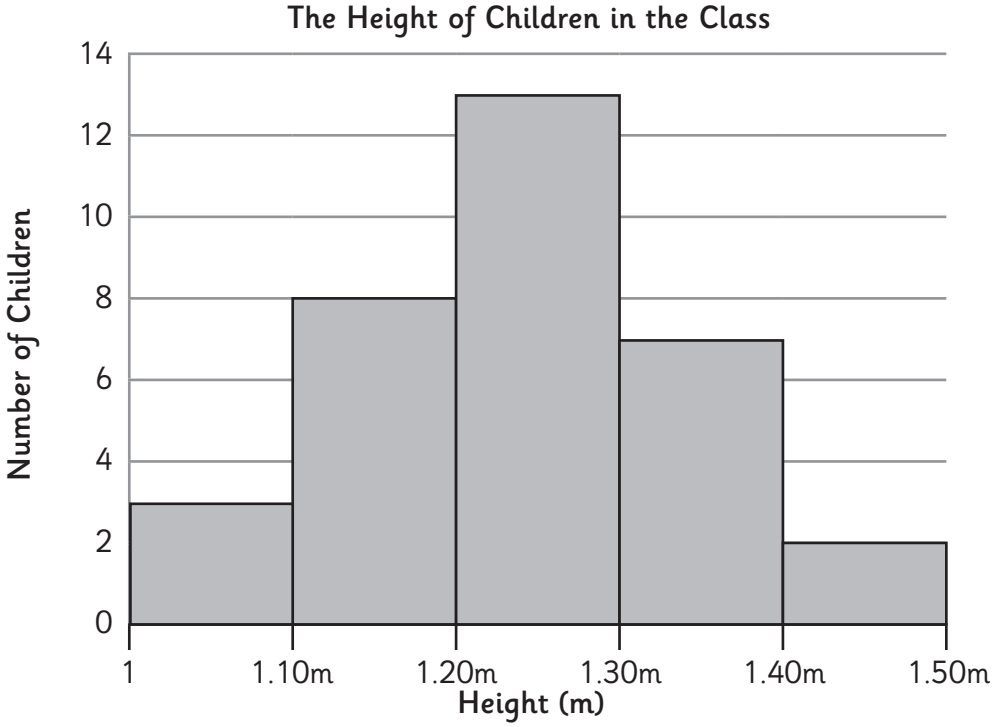
Answer these questions about the graph:

b) How many more pet cats are there than pet dogs? 1 mark

c) What is the least common pet? 1 mark

d) How many pets are there altogether? 1 mark

3. Here is a continuous bar graph showing the heights of children in a class:



a) How many children are 1.30m or taller? 1 mark

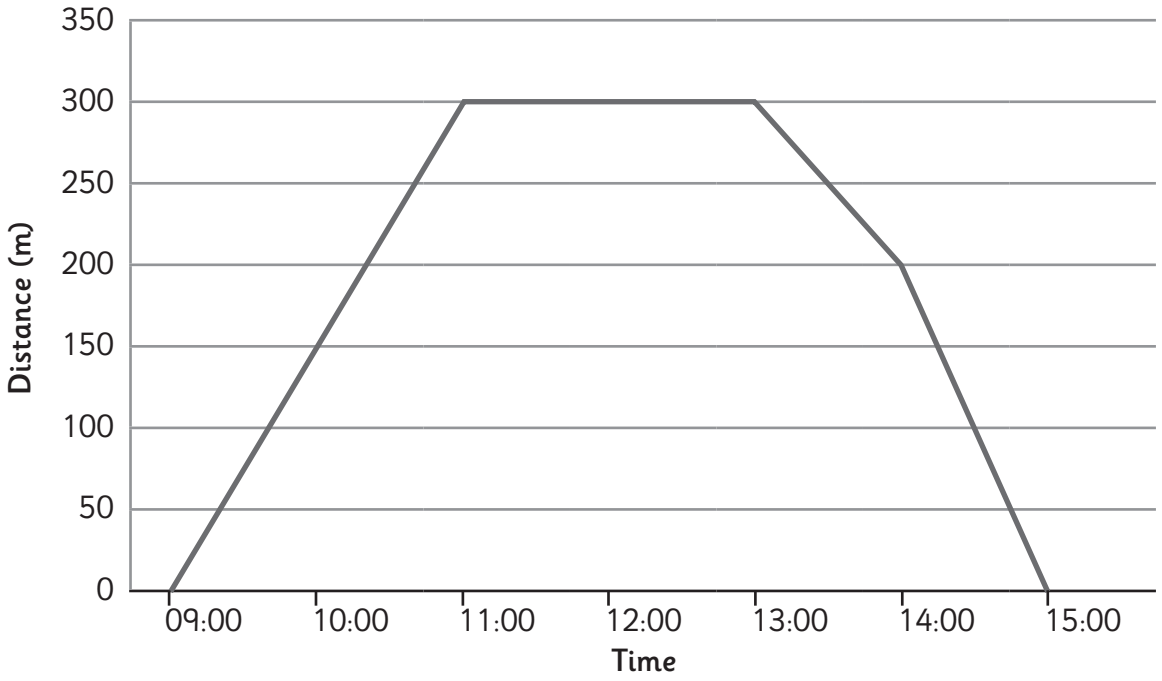
b) How many children are less than 1.20m tall? 1 mark

c) Amy, one of the children in the class, who is 1.14m tall says: "7 other children are the same height as me" Explain why she is not likely to be correct. 1 mark

d) Four children are 1.20m – 1.24m tall. How many children are 1.25m – 1.29m tall? 1 mark

Total for this page

4. This line graph shows the distance Jack was from his home on one day:



a) What was the maximum distance Jack was from home?

1 mark

b) At approximately what times was Jack only 100m from home?

and

2 marks

c) How far away from home was Jack at 13:30?

1 mark

Total for this page

<table>
<tr><th>question</th><th>answer</th><th>marks</th><th>notes</th></tr>
<tr><td colspan="4">i. interpret and present discrete and continuous data using appropriate graphical methods, including bar charts and time graphs.
ii. solve comparison, sum and difference problems using information presented in bar charts, pictograms, tables and other graphs.</td></tr>
<tr><td>1a</td><td>37</td><td>1</td><td>Allow 35-39</td></tr>
<tr><td>1b</td><td>14</td><td>1</td><td>Allow 13-15</td></tr>
<tr><td>1c</td><td>193 - 199</td><td>1</td><td>Allow 205-215
Note Columns are:<table><tr><td>Transport</td><td>Number of Children</td></tr><tr><td>Car</td><td>75</td></tr><tr><td>Bus</td><td>24</td></tr><tr><td>Walk</td><td>89</td></tr><tr><td>Tram</td><td>13</td></tr><tr><td>Bicycle</td><td>7</td></tr></table></td></tr>
<tr><td>2a</td><td>Award 1 mark for each of the following:

Suitable title
Suitable label for horizontal axis
Suitable label for vertical axis
Suitable scale, equally spaced
Bars drawn accurately for each animal
Bars equally spaced and equally drawn on the chart</td><td>up to 6 marks</td><td></td></tr>
<tr><td>2b</td><td>5</td><td>1</td><td></td></tr>
<tr><td>2c</td><td>Gerbil</td><td>1</td><td></td></tr>
<tr><td>2d</td><td>135</td><td>1</td><td></td></tr>
<tr><td>3a</td><td>9</td><td>1</td><td></td></tr>
<tr><td>3b</td><td>11</td><td>1</td><td></td></tr>
<tr><td>3c</td><td>The bar chart shows 7 other children have a height between 1.10m and 1.19m, not exactly 1.14m like Amy.</td><td>1</td><td>Accept any answer that explains the bar chart represents continuous data.</td></tr>
<tr><td>3d</td><td>9</td><td>1</td><td></td></tr>
<tr><td>4a</td><td>300m</td><td>1</td><td>Accept just 1</td></tr>
<tr><td>4b</td><td>09:40 and 14:30</td><td>2</td><td>1 mark for each. Accept 09:30 – 09:50 and 14:20 – 14:40</td></tr>
<tr><td>4c</td><td>250m</td><td>1</td><td></td></tr>
<tr><td colspan="2"></td><td>Total 20</td><td></td></tr>
</table>