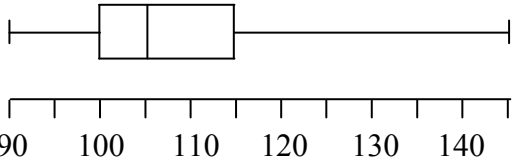


Qu	Give one mark for each •	Illustration for awarding mark
1a	ans: $72^\circ$ <span style="float: right;">2 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> makes fraction and multiplies</li> <li>•<sup>2</sup> answer</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>240/1200 \times 360^\circ</math></li> <li>•<sup>2</sup> <math>72^\circ</math></li> </ul>
b	ans: <b>200 pupils</b> <span style="float: right;">2 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> makes fraction and multiplies</li> <li>•<sup>2</sup> answer</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>60/360 \times 1200</math></li> <li>•<sup>2</sup> 200 pupils</li> </ul>
2	ans : $4x - x^2$ <span style="float: right;">3 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> breaks bracket</li> <li>•<sup>2</sup> starts to simplify</li> <li>•<sup>3</sup> completes simplification</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> ..... <math>-6x^2 + 10x</math>.....</li> <li>•<sup>2</sup> <math>4x</math>...</li> <li>•<sup>3</sup> .... <math>-x^2</math></li> </ul>
3	ans: $a = 3; b = 4$ <span style="float: right;">2 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> knows 'a' is amplitude</li> <li>•<sup>2</sup> knows 'b' is number of cycles</li> </ul>	Award 1 mark for $a = 4$ and $b = 3$ <ul style="list-style-type: none"> <li>•<sup>1</sup> <math>a = 3</math></li> <li>•<sup>2</sup> <math>b = 4</math></li> </ul>
4	ans : <b>box-plot</b> <span style="float: right;">4 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> orders data</li> <li>•<sup>2</sup> finds min, max, median</li> <li>•<sup>3</sup> find Q1, Q3</li> <li>•<sup>4</sup> draws boxplot with appropriate scale</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> 90, 95, 100, 100, ..... 130, 145</li> <li>•<sup>2</sup> 90, 145, 105</li> <li>•<sup>3</sup> 100, 115</li> <li>•<sup>4</sup> </li> </ul>
5a	ans : $(3x - 2y)(3x + 2y)$ <span style="float: right;">1 mark</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> factorises correctly</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>(3x - 2y)(3x + 2y)</math></li> </ul>
b	ans: $(3x + 2y)/2$ <span style="float: right;">2 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> knows to factorise both lines</li> <li>•<sup>2</sup> cancels to answer</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>(3x - 2y)(3x + 2y) / 2(3x - 2y)</math></li> <li>•<sup>2</sup> <math>(3x + 2y)/2</math></li> </ul>
6	ans: <b>D</b> <span style="float: right;">2 marks</span> <ul style="list-style-type: none"> <li>•<sup>1</sup> rearranges to <math>y = mx + c</math></li> <li>•<sup>2</sup> answer</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>y = -\frac{3}{2}x + 4</math></li> <li>•<sup>2</sup> D</li> </ul>

Qu	Give one mark for each •	Illustration for awarding mark
7	ans : head and even number      2 marks <ul style="list-style-type: none"> <li>•<sup>1</sup> correct option chosen</li> <li>•<sup>2</sup> valid reason</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> head and even number</li> <li>•<sup>2</sup> more possible outcomes with even number</li> </ul>
8	ans: $b = \sqrt{\frac{a-7}{c}}$ 3 marks <ul style="list-style-type: none"> <li>•<sup>1</sup> starts to re-arrange</li> <li>•<sup>2</sup> continues to re-arrange</li> <li>•<sup>3</sup> takes square root of RHS</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>b^2c = a - 7</math></li> <li>•<sup>2</sup> <math>b^2 = \frac{a-7}{c}</math></li> <li>•<sup>3</sup> <math>b = \sqrt{\frac{a-7}{c}}</math></li> </ul>
9	ans : 150°      4 marks <ul style="list-style-type: none"> <li>•<sup>1</sup> substitutes relevant values in formula</li> <li>•<sup>2</sup> rearranges to find sinABC</li> <li>•<sup>3</sup> correct acute angle</li> <li>•<sup>4</sup> correct obtuse angle</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>20 = \frac{1}{2} \times 8 \times 10 \times \sin ABC</math></li> <li>•<sup>2</sup> <math>\sin ABC = \frac{1}{2}</math></li> <li>•<sup>3</sup> 30°</li> <li>•<sup>4</sup> 150°</li> </ul>
10a	ans : $m^8$ 1 mark <ul style="list-style-type: none"> <li>•<sup>1</sup> answer</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>m^8</math></li> </ul>
b	ans: 1/25      2 marks <ul style="list-style-type: none"> <li>•<sup>1</sup> interprets index number correctly</li> <li>•<sup>2</sup> evaluates correctly</li> </ul>	<ul style="list-style-type: none"> <li>•<sup>1</sup> <math>\frac{1}{\sqrt[3]{125^2}}</math></li> <li>•<sup>2</sup> <math>\frac{1}{25}</math></li> </ul>
		<b>Total: 30marks</b>