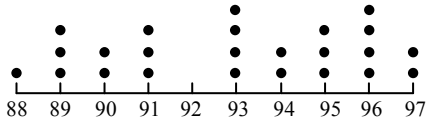


Qu	Give one mark for each •	Illustration for awarding mark
1	ans : 8.5 2 marks • ¹ identifies quartiles • ² calculates SIR	• ¹ 11, 28 • ² $(28 - 11) \div 2 = 8.5$
2	ans : $15p^2 - pq - 2q^2$ 2 marks • ¹ multiplies out brackets • ² simplifies	• ¹ $15p^2 - 6pq + 5pq - 2q^2$ • ² $15p^2 - pq - 2q^2$
3	ans: $y = 5 \sin 3x$ 3 marks • ¹ knows to use max/min value • ² recognizes shape • ³ realises 3 cycles	• ¹ 5..... • ²sin..... • ³3x
4	ans: $23 - 6x$ 3 marks • ¹ multiplies out bracket • ² begins to simplify • ³ completes simplification	• ¹-12x + 15..... • ² 23 • ³ - 6x
5	ans: 15.7 litres 5 marks • ¹ uses correct radius and height • ² knows how to find volume • ³ calculates volume of cylinder • ⁴ calculates volume of oil • ⁵ states volume in litres	• ¹ $r = 10\text{cm}; h = 100\text{cm}$ • ² $V = \pi r^2 h = 3.14 \times 10^2 \times 100$ • ³ $314\,00\text{cm}^3$ • ⁴ $314\,00 \div 2 = 157\,00\text{cm}^3$ • ⁵ 15.7 litres
6a	ans : dot plot drawn 2 marks •1 suitable scale •2 dots in correct places	•1  •2
b	ans: 2.5 3 marks •1 identifies upper and lower quartiles •2 knows how to find SIQR •3 answer	•1 95.5, 90.5 •2 $(95.5 - 90.5) \div 2$ •3 2.5
c	ans: $\frac{3}{4}$ 2 marks •1 correct numerator •2 simplifies fraction	•1 18 $\frac{3}{4}$ •2
7	ans: $(x + 4)(x - 7)$ 2 marks •1 one factor correct •2 second factor correct	•1 $(x + 4)$ •2 $(x - 7)$

8	ans : 28° • ¹ calculates angle OBA • ² calculates angle OBC • ³ calculates angle CBD	3 marks	• ¹ 28° (isosceles Δ) • ² $90^\circ - 28^\circ = 62^\circ$ (angle in a semi-circle) • ³ $90^\circ - 62^\circ = 28^\circ$ (tangent)
9	ans : $\frac{(x-3)}{(x+4)}$ • ¹ knows to factorise denominator • ² cancels to answer	2 marks	• ¹ $(x+4)(x-3)$ • ² $\frac{(x-3)}{(x+4)}$
10	ans : $\tan 225^\circ$ • 1 identifies ratio	1 marks	• 1 $\tan 225^\circ$
			Total: 30marks