

Q	Solution	Marks	Total	Comments
1 (a)	$\begin{array}{cccccc} \underline{R} & I & W & D & P & L & A \\ I & D & P & L & A & \underline{R} & \underline{W} \\ \underline{D} & A & \underline{I} & \underline{P} & L & \underline{R} & \underline{W} \\ \underline{A} & \underline{D} & \underline{I} & \underline{L} & \underline{P} & \underline{R} & \underline{W} \\ A & D & I & L & P & R & W \end{array}$	M1 A1 M1 A1 A1	5	s.c.a. two lists pivots indicated both sublists all correct with consistent use of pivots [any place can be pivot but must be consistent]
<b>Total</b>			<b>5</b>	

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1(a)	$\begin{array}{cccccccc} 4 & \underline{\quad} & 7 & 13 & 26 & 8 & 15 & 6 & 56 \\ 4 & 7 & \underline{\quad} & 13 & 26 & 8 & 15 & 6 & 56 \\ 4 & 7 & 13 & \underline{\quad} & 26 & 8 & 15 & 6 & 56 \\ 4 & 7 & 13 & 26 & \underline{\quad} & 8 & 15 & 6 & 56 \\ 4 & 7 & 13 & 8 & 26 & \underline{\quad} & 15 & 6 & 56 \\ 4 & 7 & 13 & 8 & 15 & 26 & \underline{\quad} & 6 & 56 \\ 4 & 7 & 13 & 8 & 15 & 6 & 26 & \underline{\quad} & 56 \\ 4 & 7 & 13 & \underline{\quad} & 8 & 15 & 6 & 26 & 56 \\ 4 & 7 & 8 & 13 & \underline{\quad} & 15 & 6 & 26 & 56 \\ 4 & 7 & 8 & 13 & 15 & \underline{\quad} & 6 & 26 & 56 \\ 4 & 7 & 8 & 13 & \underline{\quad} & 6 & 15 & 26 & 56 \\ 4 & 7 & 8 & \underline{\quad} & 6 & 13 & 15 & 26 & 56 \\ 4 & 7 & \underline{\quad} & 6 & 8 & 13 & 15 & 26 & 56 \\ 4 & 6 & 7 & 8 & 13 & 15 & 26 & 56 \end{array}$	M1    A1  A1F   A1	4	s.c.a  for 26  for 15  all correct
(b)	$7 + 6 + 5 + 4 + 3 + 2 + 1 = 28$	M1 A1	2	use of $\frac{n(n-1)}{2}$
<b>Total</b>			<b>6</b>	

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<b>3 (a)</b>	41 23 12 45 17 11 26 58 3 24	M1		SCA
	23 12 17 11 26 3 24 41 45 58	A1		2 sublists
	12 17 11 3 23 26 24 41 45 58	M1		Subdividing 2nd time
	11 3 12 17 23 24 26 41 45 58	A1		Pivots shown
	3 11 12 17 23 24 26 41 45 58	A1	5	All correct
<b>(b)</b>	$\frac{10 \times 9}{2} = 45$	M1 A1	2	OR 9 + 8 + 7 ...
<b>(c)</b>	58 45 41 26 24 23 17 12 11 3	B1	1	
<b>Total</b>			<b>8</b>	

Q	Solution	Marks	Total	Comments
<b>1</b>	14 27 23 36 18 25 16 66 - ~ x •• - ~ x ••	M1 <sup>??</sup> A1		SCA for comparing 27 & 25 or 16 & 23
	14 25 16 36 18 27 23 66 - ~ - ~ - ~ - ~	A1		All correct
	14 25 16 27 18 36 23 66	M1		for 2 groups of 4
	14 16 18 23 25 27 36 66	A1 A1		for 27 & 36 All correct
<b>Total</b>			<b>6</b>	