Question Number	Scheme	Marks
2.(a)	The 13 was used as a pivot in the first pass as all numbers greater than 13 are on the left (of the 13) and all numbers less than 13 are on the right (of the 13) (and this is not the case for any other value)	B1 **(1)**
(b)	17 33 14 25 23 28 21 13 9 6 10 33 17 25 23 28 21 14 13 9 10 **6** 33 25 23 28 21 17 14 13 10 **9** **6** 33 25 28 23 21 17 14 13 **10** **9** **6** 33 28 25 23 21 17 14 **13** **10** **9** **6** 33 28 25 23 21 17 14 13 10 9 6	M1 A1 A1 **(3)**
(c)	Bin 1: **33** **28** **23** Bin 2: **25** **21** 17 14 6 Bin 3: 13 10 9	M1 A1 **(2)**
		6 marks

Notes for Question 2

a1B1: pivot value of 13 correctly stated + correct reasoning (give bod provided there is a clear intention of 'values greater than the pivot, pivot, values less than the pivot' e.g. 'after the first pass all the values greater than 13 are to the left and all values smaller are on the right'. Allow for **B1** a statement such as, 'values on one side are bigger than 13 and on the other are smaller', however just a statement like 'all the values greater than 13 are to the left' is **B0** – must have an indication of values on both sides of the 13)

PLEASE NOTE NO MISREADS IN PARTS (b) AND (c) – MARK ACCORDING TO THE SCHEME AND THE SPECIAL CASE IN (b)

b1M1: Bubble sort. Consistent direction, end number (6) in place and the list beginning with the correct first four numbers (33 17 25 23) after the first pass. Do check these carefully as some candidates show the result of each comparison and swap in their first pass. Consider the placement of the candidate's numbers, rather than what the candidate labels each line of their pass. For example, assume that the first time that the 6 appears at the end of the list is the end of their first pass. Their first pass must be of the form 33 17 25 23 x 6 where x is either 5, 6 or 7 numbers
b1A1: The first, second **and** third passes correct
b2A1: Fourth and fifth passes correct – **must include a fifth pass** (ISW after correctly completing the fifth pass). If after the fourth pass they state that the list is in order and simply re-write the list then **A0** (but give bod if it could be interpreted as a fifth pass)

SC in (b): Ascending sort: First two passes correct scores **M1** only in **(b)**

17 14 25 23 28 21 13 9 6 10 33 followed by 14 17 23 25 21 13 9 6 10 28 33

c1M1: The **correct** first five values placed correctly (so must be the 33 28 25 23 and the 21) and at least eight values placed in bins - condone cumulative totals for **M1** only (the bold values)
c1A1: CSO – no additional or repeated values