

Oxford Revise | OCR Computer Science | Answers

Chapter 31 Search algorithms

Question	Answer	Extra information	Marks	AO / Specification reference
1	The data must be ordered.	1 mark for correct answer.	1	AO1 2.1.3
2	<p>Find the middle value in the array – twelve values in the array, the middle value is the sixth value – 22.</p> <p>Number 25 is larger than the middle value so the first six values are discarded.</p> <p>Find the middle value of the remaining six values – 27.</p> <p>Number 25 is smaller than the current middle value, so the upper three values are discarded.</p> <p>Find the middle value of the remaining three values – 25.</p> <p>The value is found.</p>	<p>Marking points:</p> <ul style="list-style-type: none"> • Correctly finding the middle value in the original array • Comparing the value being searched with the middle value and discarding part of the array • Finding the new middle value, comparing it with the searched for value, and discarding part of the array • Finding the final middle value, comparing it with the searched for value, and concluding the value has been found. 	<p>1</p> <p>1</p> <p>1</p> <p>1</p>	AO2 2.1.3

Question	Answer	Extra information	Marks	AO / Specification reference
3	<p>Compare the name being searched with each element of the array, starting at the first element of the array.</p> <p>If there is a match, the name has been found.</p> <p>If there is no match and the end of the array has been reached, the name is not in the array.</p>	1 mark for each correct step up to 3 marks.	<p>1</p> <p>1</p> <p>1</p>	<p>AO1</p> <p>2.1.3</p>