

OCR Computer Science AS Level

2.3.1 Searching Algorithms

Flashcards



Which searching algorithm requires data to be sorted before starting?



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Binary search



Which example shows linear search?

A

3	5	4	1	2
3	5	4	1	2
3	5	4	1	2
3	5	4	1	2
3	5	4	1	2

B

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

C

3	5	4	1	2
3	5	4	1	2
3	5	4	1	2



Which example showed linear search?

C



Perform a linear search for
9 on the values:

1, 3, 6, 7, 9, 12, 15



Perform a linear search for 9 on the values

1	3	6	7	9	12	15
1	3	6	7	9	12	15
1	3	6	7	9	12	15
1	3	6	7	9	12	15
1	3	6	7	9	12	15
1	3	6	7	9	12	15



What is the time complexity
of binary search?



What is the time complexity of binary search?

$O(\log n)$



Which example shows binary search?

A

3	5	4	1	2
3	5	4	1	2
3	5	4	1	2
3	5	4	1	2
3	5	4	1	2

B

1	2	3	4	5
1	2	3	4	5
1	2	3	4	5

C

3	5	4	1	2
3	5	4	1	2
3	5	4	1	2



Which example showed binary search?

B



Perform a binary search for
6 on the values:

1, 3, 6, 7, 9, 12, 15



Perform a binary search for 6 on the values

1	3	6	7	9	12	15
1	3	6	7	9	12	15
1	3	6	7	9	12	15
1	3	6	7	9	12	15



Which searching algorithm has a time complexity of $O(n)$?



Which searching algorithm has a time complexity of $O(n)$?

Linear search

