

AQA Computer Science A-Level

4.3.4 Searching algorithms

Flashcards

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What is a searching algorithm used for?



What is a searching algorithm used for?

A searching algorithm is used to find a specified data item within a set of data



Time complexity of linear search



Time complexity of linear search

$O(N)$



What must be true about a set of data if it is to be searched using the binary search algorithm?



What must be true about a set of data if it is to be searched using the binary search algorithm?

The set of data must be sorted



Which is most efficient,
binary search or linear search?



Which is most efficient, binary search or linear search?

Binary search



Time complexity of binary search



Time complexity of binary search

$O(\log N)$



Calculation used to find the midpoint of a set of data



Calculation used to find the midpoint of a set of data

Add the first and last positions of the data, and divide by two



Time complexity of binary tree search



Time complexity of binary tree search

$O(\log N)$



What is a binary tree?



What is a binary tree?

A rooted, ordered tree in which each node has no more than 2 children

