

OCR Computer Science A Level

2.3.1 Sorting Algorithms

Flashcards



Which sorting algorithm makes comparisons and swaps between pairs of elements?



Which sorting algorithm makes comparisons and swaps between pairs of elements?

Bubble sort



Which example shows bubble sort?

A

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

B

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

C

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



Which example showed bubble sort?

B



Which example shows insertion sort?

A

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

B

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

C

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



Which example showed bubble sort?

C



Which sorting algorithm is shown here?

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



Which sorting algorithm was shown?

Quick sort

(With the middle element
chosen as the pivot)

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



Perform the first pass of
bubble sort on the values:

4, 2, 3, 5, 1



Perform the first pass of bubble sort on the values
4, 2, 3, 5, 1.

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



Which sorting algorithm can be improved by adding a flag to record whether or not a swap has occurred?



Which sorting algorithm can be improved by adding a flag to record whether or not a swap has occurred?

Bubble sort



Perform insertion sort on the values:

4, 2, 3, 5, 1



Perform insertion sort on the values 4, 2, 3, 5, 1

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



Name the two functions in merge sort



Name the two functions in merge sort

MergeSort()

Merge()



In which sorting algorithm is the largest element in place after the first pass?



In which sorting algorithm is the largest element in place after the first pass?

Bubble sort



Which sorting algorithm uses pivots?



Which sorting algorithm uses pivots?

Quick sort



Which of our sorting algorithms
is the most efficient?



Which of our sorting algorithms is the most efficient?

Merge sort



Perform merge sort on the values:

4, 2, 3, 5



Perform merge sort on the values 4, 2, 3, 5

