

Shawn (#4454)

Date:

No.:

☐ Case:

☐ I have 5 water bottle with different height
☐ each bottle I want to put them in my cupboard
☐ with the correct order where the shortest on
☐ the left and the tallest is on the right. the order
☐ in my cupboard now are (21cm, 20cm, 15cm, 16cm, 18cm).
☐ 1 2 3 4 5

☐ * Bubble Sort \rightarrow worst case $O(n^2)$

1. Look at the first and second data

2. IF First data $<$ second data

3. do nothing

4. ELSE IF First data $>$ second data

5. Swap them around

6. Look at the second data and third data

7. IF second data $<$ third data

8. do nothing

9. ELSE IF second data $>$ third data

10. Swap them around

11. Repeat this until the fourth data

12. END

☐ Selection Sort \rightarrow worst case $O(n^2)$

1. Look at all the data

2. Find the smallest number and swap it with the
first data

3. Find the second smallest and swap it with the
second data

4. Repeat Find the smallest number until the last
data sorted

END

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Plot Complexity: bubble and selection
(bubble)

