

Print the command outputs for both insertion and bubble sort here:

Bubble sort

Out of order, swapped: 20 and -3

Out of order, swapped: 11 and -3

Sorted Array in Ascending Order:

-5 -3 11 20

Insertion sort

12, 99, 45, 181, 7,

12, 45, 99, 181, 7,

12, 45, 99, 181, 7,

7, 12, 45, 99, 181,

Were you surprised by how long the programs took to sort the numbers? Why do you think it took so long?

We were slightly surprised. I think they take so long because they are comparing the values so many times to sort them which would definitely take some time.

Which sort was faster? What made it faster?

Insertion sort is faster because it makes fewer comparisons per loop.

These sorts were run with only 100,000 values. Can you think of a situation where one of these sorts would be too slow to use?

If you're using code that is integrated with physical components where the sorts sort a lot of data inputs to initialize another output bubble sort would definitely take too long.