

HOMEWOEK 2

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Question 1

We know that insertion sort would face the worst case when the sequence is exactly reverse order. And for the usual case, it shows a better performance when the sequence are almost sorted. And shell sort is actually taking some former step to sort part of the sequence first. Then it would be much more effective when doing the insertoin sort.

To test the performance, I use some reverse sequence length from 10 to 10240. As we can see on the picture, the comparision made by insertion sort is way more than shell sort, which leads to the increase of the time.

