

Increasing



In the increasing case, Insertion Sort is much more efficient than Selection Sort. We can see this since the red curve is always above the blue curve. This makes sense since in each step in the increasing case, insertion sort only checks the current number with the previous one and does not switch the order of the array (which takes only one step) whereas selection sort still needs to check all the numbers to the right of the current number to find the next smallest value (which takes many more steps) although it too does not need to switch the order of the array. This makes the Insertion Sort graph look like a line since the number of steps taken between each different array is minimal. The steps taken within each different array in the Selection Sort graph is huge since it depends on the length of the array, causing the graph to grow more drastically.