**CS220 – Lesson 7 – Bubble and Shell Sort Worksheet**

1. Show the first 6 passes of bubble sort on the following array: {54,26,93,17,77,31,44,55,20}

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Original | 54 | 26 | 93 | 17 | 77 | 31 | 44 | 55 | 20 |
| 1st Pass |  |  |  |  |  |  |  |  |  |
| 2nd Pass |  |  |  |  |  |  |  |  |  |
| 3rd Pass |  |  |  |  |  |  |  |  |  |
| 4th Pass |  |  |  |  |  |  |  |  |  |
| 5th Pass |  |  |  |  |  |  |  |  |  |
| 6th Pass |  |  |  |  |  |  |  |  |  |

1. Show the first pass of shell sort on the following array: {54,26,93,17,77,31,44,55,20}

Use an increment (gap) of 3.

Bonus: Use an increment of 1 to complete the sorting (you’ll need to add your own rows to the table).

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Original | 54 | 26 | 93 | 17 | 77 | 31 | 44 | 55 | 20 |
| Sublist 1 |  |  |  |  |  |  |  |  |  |
| Sublist 2 |  |  |  |  |  |  |  |  |  |
| Sublist 3 |  |  |  |  |  |  |  |  |  |
| Sublist 1  Sorted |  |  |  |  |  |  |  |  |  |
| Sublist 2  Sorted |  |  |  |  |  |  |  |  |  |
| Sublist 3  Sorted |  |  |  |  |  |  |  |  |  |
| Complete  Array |  |  |  |  |  |  |  |  |  |