**Bubble Sort:**

Given the following array with integers, show the output after bubbling the next item into the top part of the array. Also, indicate the number of comparisons and swaps done at every stage.

Original Array

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value | 9 | 4 | 3 | 91 | 43 | 25 | 76 | 2 | 16 | 73 | 14 | 5 |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Next selected value: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

 Number of swaps: \_\_\_\_\_ Number of comparisons done: \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| Value |  |  |  |  |  |  |  |  |  |  |  |  |

Total number of swaps done: \_\_\_\_\_\_\_

Total number of comparisons done: \_\_\_\_\_\_\_