Solution Quiz # 2

Q1)
S(k): If we reach the test a > 0 and the value of “a” is a – k, then the value of the “product” is

\[ 1 \times (a - 0) \times (a - 1) \times (a - 2) \ldots \times (a - (a - 2)) \times (a - (a - 1)) \]

where k = 0, 1, 2…… (a – 1)

OR

\[ \prod_{i=0}^{a-1} (a-k) \]

Q2)

<table>
<thead>
<tr>
<th>Task</th>
<th>Best Case</th>
<th>Worst Case</th>
<th>Average Case</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find the largest element in the array</td>
<td>2 (for Even array)</td>
<td>3 (for Odd array)</td>
<td>( \frac{3 + 2}{2} = 2.5 )</td>
</tr>
<tr>
<td>Find the third smallest number of the array</td>
<td>4</td>
<td>n</td>
<td>( \frac{4 + n}{2} )</td>
</tr>
<tr>
<td>Find the sum of all elements of array</td>
<td>n</td>
<td>n</td>
<td>n</td>
</tr>
</tbody>
</table>