**Aufgabe 4**

F = 2, 3, 4, 1, 8, 2, 7, 4, 6

**Aufgabe 4.1 Selection Sort**

[2 3 4 1 8 2 7 4 6]

[2 3 4 1 6 2 7 4] 8

[2 3 4 1 6 2 4] 7 8

[2 3 4 1 4 2] 6 7 8

[2 3 2 1 4] 4 6 7 8

[2 3 2 1] 4 4 6 7 8

[2 1 2] 3 4 4 6 7 8

[2 1] 2 3 4 4 6 7 8

1 2 2 3 4 4 6 7 8

**Aufgabe 4.2 Natürlicher MergeSort**

Split: [2 3 4] [2 7]

[1 8] [4 6]

Merge: 1 2 3 4 8 2 4 6 7

Split: [1 2 3 4 8]

[2 4 6 7]

Merge: 1 2 2 3 4 4 6 7 8

**Aufgabe 4.3 QuickSort nach Saake**

[2 3 4 1 8 2 7 4 6]

[2 3 4 1 2 4] 6 8 7

[2 3 4 1 2] 4 6 8 7

[2 1] 2 3 4 4 6 8 7

1 [2] 2 3 4 4 6 8 7

1 2 2 [3 4] 4 6 8 7

1 2 2 [3] 4 4 6 8 7

1 2 2 3 4 4 6 [8 7]

1 2 2 3 4 4 6 7 [8]

1 2 2 3 4 4 6 7 8