```
mergeSort(0, v.length, v)
p = 0, n = 6, v = \{5, 8, 2, 1, 7, 4\}, q = 3
     mergeSort(p, q, v)
     p = 0, n = 3, v = {5, 8, 2, 1, 7, 4}, q = 1
          mergeSort(p, q, v)
          p = 0, n = 1, v = \{5, 8, 2, 1, 7, 4\}, q = 0
                 intercala(p, q, n, v)
                 v = \{5, 8, 2, 1, 7, 4\}
          mergeSort(q, n, v)
          p = 1, n = 3, v = \{5, 8, 2, 1, 7, 4\}, q = 2
                intercala(p, q, n, v)
                v = \{5, 2, 8, 1, 7, 4\}
          intercala(p, q, n, v)
          v = \{2, 5, 8, 1, 7, 4\}
     mergeSort(q, n, v)
     p = 3, n = 6, v = \{2, 5, 8, 1, 7, 4\}, q = 4
          mergeSort(p, q, v)
          p = 3, n = 4, v = \{2, 5, 8, 1, 7, 4\}, q = 3
               intercala(p, q, n, v)
                v = \{2, 5, 8, 1, 7, 4\}
          mergeSort(q, n, v)
         p = 4, n = 6, v = \{2, 5, 8, 1, 7, 4\}, q = 5
                intercala(p, q, n, v)
                v = \{2, 5, 8, 1, 4, 7\}
          intercala(p, q, n, v)
          v = \{2, 5, 8, 1, 4, 7\}
```

intercala(p, q, n, v)

 $V = \{1, 2, 4, 5, 7, 8\}$ 

```
v[] = \{5, 8, 2, 1, 7, 4\}
mergeSort(int p, int n, int[] v) {
}
```

if (p < n - 1) {

}

int q = (p + n) / 2;

mergeSort(p, q, v); mergeSort(q, n, v);

intercala(p, q, n, v);