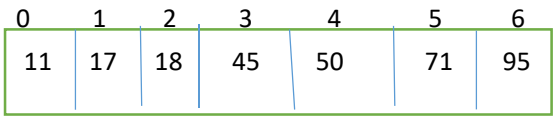
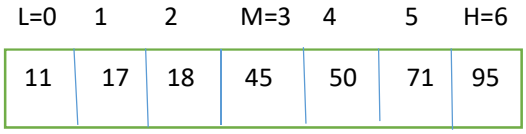
Algorithm for Binary Search

```
1.  def. Binary Search
2.  n = len(a)
3.  beg  =0
4.  end = n-1
5.  result = -1
6.  while(beg<=end):
7.     mid = (beg + end)/2
8.       If(a[mid]<=x):
9.           beg = mid+1
10.           result = mid
11.      else:
12.         End = mid – 1
13. return result
```

EXAMPLE:

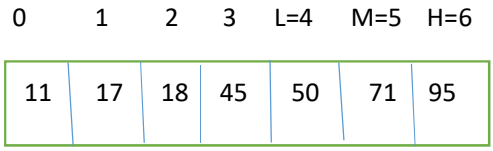


Search 50



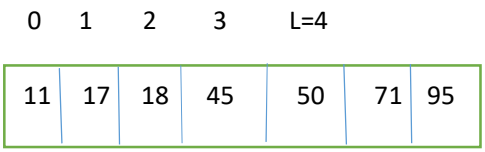
50 > 45

Take 2nd half



50 < 71

Take 1st half



50 found at position=4