Q4

```
// let A be the given array
// let size be the size of the given array
// assume array started at index 1
Q4_binary_search(A,size)
result = -1
Lower = 0
Higher = size - 1
Mid  = 0
While higher > lower + 1
      Mid = (higher + lower) / 2
      if (A[lower] - lower) != (A[mid] - mid)
            Higher = mid
      if (A[higher] - higher) != (A[mid] - mid)
            lower  = mid
Return A[lower] + 1
```

Time complexity: log(2^n) = n