3. I) If, Vector[k] = Vector[size-1], then this is the last element, remove it, done

II) If not last element, make new vector, copy up to Vector[k], skip Vector[k], continue copying

III) Destroy first vector

4. Al’s algorithm is a quadratic algorithm meaning that the run time is proportional to the square of the input. Al’s algorithm will do well under low inputs simply by intuitive mathematics under the worst case scenario, as 100^2 = 10000 and Bob’s will do better under higher inputs simply because of the mathematics as Nlog(N) will not grow as fast as N^2 at larger and larger numbers of input.

5. f(n) = ((n/2)-1) ,O(n) because you only have to do the summation for half of the elements in the array and you do not have to include the first addition.

f(n) = n^2, O(n^2)

f(n)