Section 5: Hashing & Sorting

0. Sorting Hat

Suppose we sort an array of numbers, but it turns out every element of the array is the same, e.g.,{17, 17, 17, ..., 17}. (So, in hindsight, the sorting is useless.)

a) What is the asymptotic running time of **insertion** sort in this case?

- b) What is the asymptotic running time of **selection** sort in this case?
- c) What is the asymptotic running time of **merge** sort in this case?
- d) What is the asymptotic running time of quick sort in this case?