

875. Koko Eating Bananas

Input:

piles: List[int]

h: int Hours until guards return

Each hour she chooses from any pile $\begin{cases} \text{pile}[i] > k \rightarrow \text{pile}[i] -= k \\ \text{pile}[i] \leq k \rightarrow \text{pile}[i] \end{cases}$

- $h \geq \text{len}(\text{piles})$

- $1 \leq \text{res} \leq \text{max}(\text{piles})$

Necessary eating speed won't ever be greater than the biggest pile b/c she can eat every pile in $\text{len}(\text{piles})$ hours.

Binary Search For res

Invalid $m \rightarrow l = m + 1$

Valid $m \rightarrow r = m$

Smallest possible valid hunger eating speed

$\text{can_eat}(\text{piles}, \text{speed}) \rightarrow \text{bool}$

- $\text{sum}([\text{ceil}(\text{piles}[i] / k) \text{ for } i \text{ in range}(\text{len}(\text{piles}))])$

- $\text{time_taken} \leq \text{hours_needed}$