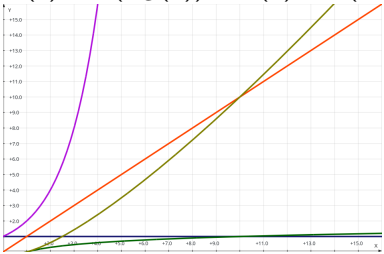
What should you know?

- $O(1) \in O(log(n)) \in O(n) \in O(n \cdot log(n)) \in O(n^2) \in O(2^n)$



- For h a monotonically increasing function ($\forall 0 < x < y, h(x) < h(y)$), $O(f(n)) \in O(g(n)) \Rightarrow O(h(f(n))) \in O(h(g(n)))$ le $O(log(log(n))) \in O(log(n))$
- For f, g, h monotonically increasing function, $O(f) \in O(g) \Rightarrow O(f \cdot h) \in O(g \cdot h)$
- Look at the asymptot :

$$L = \lim_{n \to \infty} \frac{f(n)}{g(n)}$$

  - $f \in O(g)$ if $L = 0$
  - $f \in \Omega(g)$ if $L = \infty$
  - $f \in \Theta(g)$ if $0 < L < \infty$
- Some basic properties about log: $log(x^2) = 2 \cdot log(x)$, $log(x \cdot y) = log(x) + log(y)$