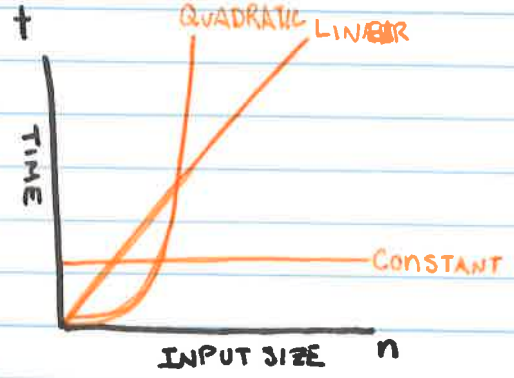
timing functions

IN ORDER TO MAKE SURE OUR PROGRAMS ARE EFFICIENT, WE TIME THEM.

WE CAN USE FUNCTIONS TO DESCRIBE THE GROWTH



WE ARE CONCERNED WITH THE RATE OF GROWTH.

BIG OH

DESCRIBES THE RELATIONSHIPS BETWEEN FUNCTIONS

$$f(n) \in O(g(n))$$
$$\text{if}$$
$$f(n) \leq c\,g(n) \quad \forall n \geq n_0$$

So $f(n)$ must be less than $g(n)$ for an infinite amount of n.

THIS IS AN UPPER BOUND

SEE: HW1 THEORY