

## 1 Definitions

- **big-Oh**  $\mathcal{O}$
- **big-Omega**  $\Omega$
- **big-Theta**  $\Theta$
  
- **little-Oh**  $o$

### 1.1 Big-Omega

Definition: Given function  $f(n)$  and  $g(n)$ , we say that

$f(n)$  is  $\Omega(g(n))$

If there are (strictly) positive constants  $c$  and  $n_0$ , such that

$f(n) \geq cg(n)$  for all  $n \geq n_0$

Note that  $c > 0$  and  $c$  must be **constant** (cannot depend on  $n$ )

Similarly to big-Oh, Big-Omega is: Reflexive, **NOT** symmetric, transitive.

# Reference section

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