Direct Way to Find to Find and Compare Growths

① Ignore Lower Order Terms

② Ignore Leading Term Constant

Examples: $f(n) = 2n^2 + n + 6$, Order of Growth : n^2 (Quadratic)

$g(n) = 100n + 3$, Order of Growth : n (Linear)

How do we compare terms ?

$$c < \log\log n < \log n < n^{1/3} < n^{1/2} < n$$

$$< n^2 < n^3 < n^4 < 2^n < n^n$$