

### Asymptotic notation

Put these functions in order so that if  $f(n) \in O(g(n))$  (i.e.  $f(n)$  is Big-Oh of  $g(n)$ ), then  $f(n)$  appears before  $g(n)$  in the list. Group together functions that have the same asymptotic order of growth (i.e.  $f(n) \in \Theta(g(n))$ ).

$$\begin{aligned} &n^2, n \log n, n^3 + \log n, \sqrt{n}, n^2 + 2n \log n, \\ &\log \log n, 17 \log n, 10n^{\frac{3}{2}}, n^5 - n^4 + 2n, \\ &5n^2 \log \log n, 3n^2 + n^3 \log n, n + 6 \log n \end{aligned}$$