

What is the order of each of the Efficient Algorithms

22.2.1

A constant factor is ignored because it does not contribute to the summation in Big O notation.

22.2.2

What is the order of each of the following functions?

a) $(n^2 + 1)/n \rightarrow \frac{n^2}{n} + \frac{1}{n} \approx \frac{n^2}{n} \approx n$

~~b) $(n^2 + \log_2(n))^2/n \rightarrow \frac{n^4 + 2n^2\log_2(n) + \log_2(n)^2}{n} = n^3$~~

c) $n^3 + 100n^2 + n \rightarrow n^3$

d) $2^n + 100n^2 + 45n \rightarrow 2^n$

e) $n2^n + n^22^n \rightarrow 2^n$