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CSCI 264-01
Homework 1

HW1 Problem 1 Writeup

Least Growth --> Most Growth

(Imagine there is a \leq sign between each line. Items on the same line are equivalence classes.)

n^{-2} , $n^{1/\log(n)}$, $(1/2)^n$

7, 123456789

$\log(\log(n))$

$\log(n^3)$, $\log_4(n)$, $\log n$

$(\log(n))^2$

\sqrt{n} , $n^{1/2}$

$n^{3/4}$

$n + 5$

$n^{4/3}$

$n \log(n)$

$3^{\log(n)}$

n^2 , $n^2 + (10^{100})(n)(\log(n))$, $4^{\log(n)}$

Notes: $4^{\log(n)} = 4^{(\log_4(n)/\log_4(2))} = (4^{\log_4(n)})^{(1/\log_4(2))} =$

$n^{(1/\log_4(2))} = n^2$

$(n^2)\log(n)$

n^4

$\log(n)^{\log(n)}$, $n^{\log(\log(n))}$

2^n , n^{2^n}

4^n , $4^{(n-1)}$

$4^{(2n)}$

$n!$

n^n

$4^{(n^2)}$