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CSC 375-01

Homework 3

3.1, 3.2, 3.3

3.1) 5n log n: best when n <= 1

2n: best when 2 ≤ n ≤ 4.

10n: best when n > 5

20n: never more efficient than the others

2n: never more efficient than the others

3.2)

4n2: never more efficient than the others

log3 n: best when n <= 9

3n: never more efficient than the others

20n: never more efficient than the others

2: best when n > 9

log2 n: best when n <= 4

n2/3: never more efficient than the others

3.3) 2, log3n, log2n, n2/3, 20n, 3n, 4n2, n!