ASSIGNMENT 1

**EX 11.1** What is the order of each of the following growth functions?

a. 10n^2 + 100n +1000

b. 10n^3 – 7

c. 2n + 100n^3

d. n^2 log n

SOLUTION

1. O(n^2)
2. O(n^3)
3. O(n^3)
4. O(n^2logn)

**EX 11.2**  Arrange the growth functions of the previous exercise in ascending order of efficiency for n = 10 and again for n = 1,000,000.

**SOLUTION**

**Order of efficiency (least to most efficient)**

1. 10n² + 100n + 1000
2. n² log n
3. 2n + 100n³
4. 10n³ - 7