Show All Solutions

Rosen, Discrete Mathematics and Its Applications, 7th edition
Extra Examples
Section 3.2—The Growth of Functions

Extra Examples — *Page references correspond to locations of Extra Examples icons in the textbook.*

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p.206, icon at Example 1

#1. Give a big-O estimate for each of these functions. Use a simple function in the big-O estimate.

(a) $3n + n^3 + 4$.

(b) $1 + 2 + 3 + \cdots + n$.

(c) $\log_{10}(2^n) + 10^{10}n^2$.

See Solution

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p.206, icon at Example 1

#2. Use the definition of big-O to prove that $5x^4 - 37x^3 + 13x - 4 = O(x^4)$

See Solution

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