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# Asymptotic Notation



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Now, it's time for a short quiz to recap what you've learned. The quiz is **graded**, so you can take it only once. Each question will be followed by feedback explaining why your answer is right or wrong. If your answer is incorrect, you will see a suggestion of what you might need to refresh your memory.

Good luck!

Read the question below and select the correct answer. Then, click "Submit."

For a given function  $g(n)$ , what is the correct definition of  $O(g(n))$ ?

- ☐  $O(g(n)) = \{f(n) : \text{there exist positive constants } c, n_0 \text{ such that } 0 \leq g(n) \leq cf(n) \text{ for all } n \geq n_0\}$
- ☒  $O(g(n)) = \{f(n) : \text{there exist positive constants } c, n_0 \text{ such that } 0 \leq f(n) \leq cg(n) \text{ for all } n \geq n_0\}$
- ☐  $O(g(n)) = \{f(n) : \text{there exist positive constants } n_0 \text{ such that } 0 \leq f(n) \leq g(n) \text{ for all } n \geq n_0\}$

Correct: Great job!

Submit You have used 1 of 1 attempt

Read the question below and select **all** the answers that are correct. Then, click "Submit."

Which TWO of the following statements are correct?

- ☒  $3n^5 + 2n^3 + n \log n = \Omega(n)$
- ☒  $3n^5 + 2n^3 + n \log n = \Omega(n^3)$
- ☐  $3n^5 + 2n^3 + n \log n = \Omega(n^6)$
- ☐  $n = \Omega(n^2)$

Correct: Well done!

Submit You have used 1 of 1 attempt