

# Big O Notation

Click on a question number to see how your answers were marked and, where available, full solutions.

Question Number	Score
Question 1	8 / 8
Total	8 / 8 (100%)

## Performance Summary

Exam Name:	Big O Notation
Session ID:	15674544172
Student's Name:	Makolo, Daniella (dom10)
Exam Start:	Thu Nov 23 2023 22:48:03
Exam Stop:	Thu Nov 23 2023 22:54:59
Time Spent:	0:06:55

## Question 1

For each of the following statements, specify if the statement is true or false.

a)

$3x^2 + 3x \in O(2x^5 + 3x^3 + 7x^2 + 8x)$

true ✓

Expected answer:

true ✓

$2x^5 + 3x^3 + 7x^2 + 8x \in O(3x^2 + 3x)$

false ✓

Expected answer:

false ✓

$3x^4 \in O(2x^4 + 4x)$

true ✓

Expected answer:

true ✓

$2x^4 + 4x \in O(3x^4)$

true ✓

Expected answer:

true ✓

Gap 0

✓ You chose a correct answer. You were awarded 1 mark.

Gap 1

✓ You chose a correct answer. You were awarded 1 mark.

Gap 2

✓ You chose a correct answer. You were awarded 1 mark.

## Gap 3

✓ You chose a correct answer. You were awarded 1 mark.

You scored 4 marks for this part.

Score: 4/4 ✓

b)

$$x^4 \in O(x^4 \times \log_2(x))$$

true ✓

Expected answer:

true ✓

$$x^4 \in O\left(\frac{x^4}{\log_2(x)}\right)$$

false ✓

Expected answer:

false ✓

$$x^5 \in O(x^4 \times \log_2(x))$$

false ✓

Expected answer:

false ✓

$$x^3 \in O\left(\frac{x^3}{\log_2(x)}\right)$$

false ✓

Expected answer:

false ✓

## Gap 0

✓ You chose a correct answer. You were awarded 1 mark.

## Gap 1

✓ You chose a correct answer. You were awarded 1 mark.

## Gap 2

✓ You chose a correct answer. You were awarded 1 mark.

## Gap 3

✓ You chose a correct answer. You were awarded 1 mark.

You scored 4 marks for this part.

Score: 4/4 ✓