What is the final Big-O?

$O(m^2 + 2m)$

Algorithms

What is the final Big-O?

$O(n + n \log n + 2m)$

Algorithms

What is the final Big-O?

$O(n^2 + 2n + m)$

Algorithms

What is the final Big-O?

$O(n + n + n)$

Algorithms

Which is Big-O is larger?

$O(n)$

or

$O(2^n)$

Algorithms

Which is Big-O is larger?

$O(1)$

or

$O(n)$

Algorithms

Which is Big-O is larger?

$O(n^2)$

or

$O(n \log n)$

Algorithms

Which is Big-O is larger?

$O(n!)$

or

$O(2^n)$

Algorithms

Which is Big-O is larger?

$O(n)$

or

$O(\log n)$

Algorithms

Which is Big-O is larger?

$O(\log n!)$

or

$O(n \log n)$

Algorithms

ANSWER

$O(n \log n + m)$

Only keep the most significant

ANSWER

$O(m^2)$

Only keep the most significant

ANSWER

$O(n)$

(Remove duplicate terms and constant multiplies)

AKA: Linear

ANSWER

$O(n^2 + m)$

Only keep the most significant

ANSWER

$O(n)$

AKA: Linear

ANSWER

$O(2^n)$

AKA: Exponential

ANSWER

$O(n!)$

AKA: Factorial

ANSWER

$O(n^2)$

AKA: Loglinear

ANSWER

They are the same.

ANSWER

$O(n)$

AKA: Linear

Which is Big-O is larger?

$O(n^2)$

or

$O(2^n)$

Algorithms

Which is Big-O is larger?

$O(n \log n)$

or

$O(n)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(1)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(\log \log n)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(\log n)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(n!)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(n)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(n^2)$

Algorithms

In Big-O Notation,

What is the name for the notation,

$O(n^c)$

Algorithms

What is the final Big-O?

$O(n + n)$

Algorithms

ANSWER

$O(n \log n)$

AKA: Linearithmic

ANSWER

$O(2^n)$

AKA: Exponential

ANSWER

Double logarithmic

ANSWER

Constant

ANSWER

Factorial

ANSWER

Logarithmic

ANSWER

Quadratic

ANSWER

Linear

ANSWER

$O(n)$

Remove duplicate terms and constant multiplies

ANSWER

Polynomial or Algebraic

What is the final Big-O?

$O(3n + m)$

Algorithms

What is the final Big-O?

$O(m \times n)$

Algorithms

ANSWER

$O(m \times n)$

No change

ANSWER

$\mathrm{O}(n + m)$

Remove duplicate terms
and constant multiplies