

Mathematical Reasoning - Class XI

Past Year JEE Questions

Questions

Question: 01

Which of the following is the negation of the statement "for all $M > 0$, there exists $x \in S$ such that $x \geq M$ " ?

- A. there exists $M > 0$, such that $x < M$ for all $x \in S$
- B. there exists $M > 0$, there exists $x \in S$ such that $x \geq M$
- C. there exists $M > 0$, there exists $x \in S$ such that $x < M$
- D. there exists $M > 0$, such that $x \geq M$ for all $x \in S$

Solutions

Solution: 01

Explanation

P : for all $M > 0$, there exists $x \in S$ such that $x \geq M$.

$\sim P$: there exists $M > 0$, for all $x \in S$

Such that $x < M$

Negation of 'there exists' is 'for all'.