

MATHEMATICAL INDUCTION

1. Consider the statement : " $P(n)$: $n^2 - n + 41$ is prime." Then which one of the following is true?
- (1) $P(5)$ is false but $P(3)$ is true
 - (2) Both $P(3)$ and $P(5)$ are false
 - (3) $P(3)$ is false but $P(5)$ is true
 - (4) Both $P(3)$ and $P(5)$ are true

SOLUTION

1. **Ans. (4)**

$P(n) : n^2 - n + 41$ is prime

$P(5) = 61$ which is prime

$P(3) = 47$ which is also prime