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Research Paper

Proof of Goldbach Conjecture

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ABSTRACT

Goldbach conjecture states that every positive even integer can be expressed as the sum of two prime numbers. Basic concepts of number theory are used to prove this conjecture. **KEYWORDS:** prime, odd, even

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Proof Let x and y be two non-prime odd numbers and z be any even number. Now, every odd number can be expressed as the sum of two even numbers, Therefore, x+y=zLet k be the common factor of x and y. k is odd _(since x and y are odd) Therefore, k(x'+y')=z=> x'+ y'= m (since k is a factor of z) m is even _(since even+odd=even) Now x' and y' are prime numbers and m is even. Hence, every even number can be expressed as the sum of two prime numbers. Reference Wikipedia