

# Proof of Goldbach's conjecture

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**Abstract:** The article provides a proof of Goldbach's conjecture.

**Key words:** prime numbers, binary Goldbach problem.

## 1. Introduction

Goldbach's conjecture (Goldbach's problem, Euler's problem, binary Goldbach's problem) is the statement that any even number starting from 4 can be represented as the sum of two primes.

This conjecture is one of the most famous open mathematical problems, included in the legendary list of Hilbert problems [1] and is one of the few Hilbert problems that still remain unsolved.

## 2. Proof

The author proves the Goldbach Conjecture by representing even numbers as the sum of two natural numbers of the form  $k = 6m \mp 1$ .

## References

[1] Hilbert, David Mathematical problems. *Bull. Amer. Math. Soc.* 8 (1902), no. 10, 437–479.