

# 322. Coin Change

You are given an integer array `coins` representing coins of different denominations and an integer `amount` representing a total amount of money.

Return *the fewest number of coins that you need to make up that amount*. If that amount of money cannot be made up by any combination of the coins, return `-1`.

You may assume that you have an infinite number of each kind of coin.

## **Example 1:**

Input: coins = [1,2,5], amount = 11

Output: 3

Explanation:  $11 = 5 + 5 + 1$

## **Example 2:**

Input: coins = [2], amount = 3

Output: -1

## **Example 3:**

Input: coins = [1], amount = 0

Output: 0

## **Constraints:**

- $1 \leq n \leq 12$
- $1 \leq coins_i \leq 2^{31} - 1$
- $0 \leq amount \leq 10^4$