#include <stdio.h>

// Function to find the number of ways to make change for a given amount

int countWays(int coins[], int m, int amount) {

int table[amount + 1];

table[0] = 1;

// Initialize all table values as 0

for (int i = 1; i <= amount; i++)

table[i] = 0;

// Iterate over all coins and update the table[] values

for (int i = 0; i < m; i++)

for (int j = coins[i]; j <= amount; j++)

table[j] += table[j - coins[i]];

return table[amount];

}

int main() {

int coins[] = {1, 2, 5};

int m = sizeof(coins) / sizeof(coins[0]);

int amount = 12;

printf("Number of ways to make change: %d\n", countWays(coins, m, amount));

return 0;

}