// C program for coin change problem.

#include<stdio.h>

int count( int S[], int m, int n )

{

    int i, j, x, y;

    // We need n+1 rows as the table is constructed

    // in bottom up manner using the base case 0

    // value case (n = 0)

    int table[n+1][m];

    // Fill the enteries for 0 value case (n = 0)

    for (i=0; i<m; i++)

        table[0][i] = 1;

    // Fill rest of the table entries in bottom

    // up manner

    for (i = 1; i < n+1; i++)

    {

        for (j = 0; j < m; j++)

        {

            // Count of solutions including S[j]

            x = (i-S[j] >= 0)? table[i - S[j]][j]: 0;

            // Count of solutions excluding S[j]

            y = (j >= 1)? table[i][j-1]: 0;

            // total count

            table[i][j] = x + y;

        }

    }

    return table[n][m-1];

}

// Driver program to test above function

int main()

{

    int arr[] = {1, 2, 3};

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

    int n = 4;

    printf(" %d ", count(arr, m, n));

    return 0;

}