Implement a function that can sum two [reduced fractions](keyword://reduced-fraction" \t "_blank) and produce a new one.

**Example**

For a = [3, 5] and b = [7, 5], the output should be  
fractionSum(a, b) = [2, 1].

3 / 5 + 7 / 5 = 10 / 5 = 2 / 1, so the answer is [2, 1].

Input/Output

* **[execution time limit] 3 seconds (cs)**
* **[input] array.integer a**

Array a of length 2representing a reduced fraction a[0] / a[1].

*Guaranteed constraints:*  
1 ≤ a[i] ≤ 10.

* **[input] array.integer b**

Array b of length 2representing a reduced fraction b[0] / b[1].

*Guaranteed constraints:*  
1 ≤ b[i] ≤ 10.

* **[output] array.integer**
  + Sum of a and b as a reduced fraction.

<https://app.codesignal.com/challenge/8gsShDpKnvi4yECNt>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

static int gcd(int a, int b)

{

if (a == 0)

return b;

return gcd(b % a, a);

}

//Function to add two fractions

//static int[] addFraction(int num1, int den1, int num2, int den2)

static int[] fractionSum(int[] a, int[] b)

{

int num1 = a[0];

int den1 = a[1];

int num2 = b[0];

int den2 = b[1];

// Finding gcd of den1 and den2

int den3 = gcd(den1, den2);

// Denominator of final fraction obtained

// finding LCM of den1 and den2

// LCM \* GCD = a \* b

den3 = (den1 \* den2) / den3;

// Changing the fractions to have same denominator

// Numerator of the final fraction obtained

int num3 = (num1) \* (den3 / den1) + (num2) \* (den3 / den2);

// Calling function to convert final fraction

// into it's simplest form

// lowest(den3, num3);

int common\_factor = gcd(num3, den3);

// Converting both terms into simpler

// terms by dividing them by common factor

den3 = den3 / common\_factor;

num3 = num3 / common\_factor;

return new int[] { num3, den3 };

}

static void Main(string[] args)

{

int num1 = 1, den1 = 500, num2 = 2, den2 = 1500;

Console.Write(num1 + "/" + den1 + " + " + num2 + "/" + den2 + " is equal to ");

addFraction(num1, den1, num2, den2);

Console.ReadLine();

}

}

}