**6 kyu**

**Simple division**

13692% of 8322 of256[KenKamau](https://www.codewars.com/users/KenKamau)

C#

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In this Kata, you will be given two numbers, a and b, and your task is to determine if the first number a is divisible by all the prime factors of the second number b. For example: solve(15,12) = False because 15 is not divisible by all the prime factors of 12 (which include2).

See test cases for more examples.

Good luck!

If you like this Kata, please try:

[Sub-array division](https://www.codewars.com/kata/59eb64cba954273cd4000099)

[Divisor harmony](https://www.codewars.com/kata/59bf97cd4f98a8b1cd00007e)

<https://www.codewars.com/kata/simple-division/csharp>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

public static HashSet<int> primeFactors(int n)

{

// Print the number of 2s that divide n

HashSet<int> hs = new HashSet<int>();

while (n % 2 == 0)

{

//Console.Write(2 + " ");

hs.Add(2);

n /= 2;

}

// n must be odd at this point. So we can

// skip one element (Note i = i +2)

for (int i = 3; i <= Math.Sqrt(n); i += 2)

{

// While i divides n, print i and divide n

while (n % i == 0)

{

//Console.Write(i + " ");

hs.Add(i);

n /= i;

}

}

// This condition is to handle the case whien

// n is a prime number greater than 2

if (n > 2) hs.Add(n);

//Console.Write(n);

return hs;

}

public static bool Solve(int a, int b)

{

//throw new NotImplementedException();

HashSet<int> pf = primeFactors(b);

foreach(int item in pf)

{

if (a % item != 0) return false;

}

return true;

}

static void Main(string[] args)

{

Console.ReadLine();

}

}

}