

Newton School

my.newtonschool.co/playground/code/ponj5uiliwic/

Refer a friend

My Roles

DI Dr

Arena question - Make Multiple

by Dr. Darshan Ingle

Take a Tour

Report

Simpler Explanation

Concepts Used

Example

Sample Input:

3

3 6

4 14

9 10

Sample Output:

YES

YES

NO

Explanation:

We can choose X = 0 and add them to 3 and 6. Thus, 3 is a factor of 6.

We can choose X = 1 and add them to 4 and 14. Thus, 4 + 1 = 5 is a factor of 14 + 1 = 15.

There is no possible value of X to add such that A becomes a factor of B.

Generate Expected Output

Insert Input

Input

Java (OpenJDK 13.0.1)

Ask AI CodeLens

16px

Run

Submit

3

6

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{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

// read number of test cases

int t = sc.nextInt();

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

{

int A = sc.nextInt();

int B = sc.nextInt();

int remainder = B%A;

if (remainder==0)

{

System.out.println("YES");

}

else

{

// Find the smallest integer X such that (B+X) is divisible by A

// int X = A - remainder;

if ((B-A)>=A)

System.out.println("YES");

else

System.out.println("NO");

}

}

}

Input

Output

Error

Support

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https://my.newtonschool.co/playground/code/ponj5uiliwic/#

```
J Main.java 1 •
J Main.java > Main > main(String[])
72 // 1^2 + 3^2 + 5^2 + ... + (2^n-1)^2
73 import java.util.Scanner;
74
75 public class Main {
    Run | Debug
76     public static void main(String[] args) {
77         Scanner sc = new Scanner(System.in);
78         System.out.println("Enter n:");
79         int n = sc.nextInt();
80         int sum = 0;
81
82         for(int i=1; i <= (2^n-1); i+=2)
83             sum = sum + i*i;
84
85         System.out.println("Sum of the series is: "+sum);
86     }
87 }
```

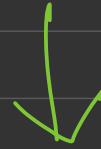
$1^2 + 3^2 + 5^2 + \dots + (2^n - 1)^2$
= If $n = 8$,
 $1^2 + 3^2 + 5^2 + \dots + (2^7)^2$

$i = x \times x$
 $Sum = 0 + (1 \times 1) + (3 \times 3) + (5 \times 5) + (7 \times 7) + \dots + (2^7 \times 2^7)$

PROBLEMS 1 OUTPUT DEBUG CONSOLE TERMINAL

Enter a binary number:
101010101011111
Hexadecimal equivalent: 1555F
o (base) ingledarshan@192 NS 29 Apr 2023 %

H/w Problem → in white ink below



The screenshot shows a Java IDE with a code editor and a terminal. The code is for a program to calculate the sum of squares of powers of 2 up to $(2^{n-1})^2$. Handwritten white ink annotations include:

- At the top right, a green arrow points from the text "H/w Problem" to the code editor.
- On the right side, the formula $(2^0)^2 + (2^1)^2 + (2^2)^2 + (2^3)^2 + \dots + (2^{n-1})^2$ is written.
- Below it, the formula $1^2 + 3^2 + 5^2 + \dots + (2^{n-1})^2$ is written, with a note "# n=8, 1^2 + 3^2 + 5^2 + \dots + (2^7)^2".
- At the bottom right, the formula $1^2 + 2^2 + 4^2 + 8^2 + \dots + (2^{n-1})^2$ is written.
- Below that, the formula $sum = 0 + (1 \times 1) + (3 \times 3) + (5 \times 5) + (7 \times 7) + \dots + (2^7 \times 2^7)$ is written.
- At the bottom left, the code $for(i=0; i \leq n; i++)$ and $sum = sum + (math.pow(2, i) * math.pow(2, i));$ is written.
- At the bottom center, there is a green 'X' mark.

```
12 // 1^2 + 3^2 + 5^2 + ... + (2^n-1)^2
13 import java.util.Scanner;
14
15 public class Main {
16     Run | Debug
17     public static void main(String[] args) {
18         Scanner sc = new Scanner(System.in);
19         System.out.println("Enter n:");
20         int n = sc.nextInt();
21         int sum = 0;
22
23         for(int i=1; i <= (2^n-1); i+=2)
24             sum = sum + i*i;
25
26         System.out.println("Sum of the series is: "+sum);
27     }
28 }
```

Enter a binary number:
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