

Contest Duration: 2025-06-28(Sat) 22:00 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250628T2100&p1=248>) - 2025-06-28(Sat) 23:40 (<http://www.timeanddate.com/worldclock/fixedtime.html?iso=20250628T2240&p1=248>) (local time) (100 minutes)

[Back to Home \(/home\)](#)

[Top \(/contests/abc412\)](#)

[Tasks \(/contests/abc412/tasks\)](#)

[Clarifications \(/contests/abc412/clarifications\)](#) [Results ▾](#)

[Standings \(/contests/abc412/standings\)](#)

[Virtual Standings \(/contests/abc412/standings/virtual\)](#) [Editorial \(/contests/abc412/editorial\)](#)



## E - LCM Sequence

[Editorial \(/contests/abc412/tasks/abc412\\_e/editorial\)](#)

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Time Limit: 4 sec / Memory Limit: 1024 MiB

Score : 500 points

### Problem Statement

For a positive integer  $n$ , define  $A_n$  as the least common multiple of  $1, 2, \dots, n$ .

You are given positive integers  $L$  and  $R$ . How many distinct integers are contained in the sequence  $(A_L, A_{L+1}, \dots, A_R)$ ?

### Constraints

- $1 \leq L \leq R \leq 10^{14}$
- $R - L \leq 10^7$
- $L$  and  $R$  are integers.

### Input

The input is given from Standard Input in the following format:

`L R`

### Output

Output the number of distinct integers contained in the sequence  $(A_L, A_{L+1}, \dots, A_R)$  at 2026-01-02 (Fri) 105:26,10:41 11:00

## Sample Input 1

Copy

```
4 12
```

Copy

## Sample Output 1

Copy

```
6
```

Copy

Listing  $A_4$  through  $A_{12}$ :

- $A_4 = 12$
- $A_5 = 60$
- $A_6 = 60$
- $A_7 = 420$
- $A_8 = 840$
- $A_9 = 2520$
- $A_{10} = 2520$
- $A_{11} = 27720$
- $A_{12} = 27720$

Thus,  $(A_4, A_5, \dots, A_{12})$  contains six distinct integers.

## Sample Input 2

Copy

```
123456789 123456789
```

Copy

## Sample Output 2

Copy

```
1
```

Copy

## Sample Input 3

Copy

```
99999990000000 100000000000000
```

Copy

## Sample Output 3

Copy

```
310458
```

Copy

2026-01-02 (Fri)

05:26:16 +11:00

'#telegram)

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