



# STUDENT REPORT

## DETAILS

### Name

N ABHISHEK

### Roll Number

KUB23ECE025

## EXPERIMENT

### Title

ROBO RACE

### Description

There is a robot race happening between two robots named Robotop and Robocop. Both the robots reach the starting point to begin the race on a Circular track

Race starts at time  $T = 0$  seconds. Robotop starts the race at  $T = X$ th second and takes exactly  $N$  seconds to complete one lap. On the other hand. Robocop starts the race at  $T = Y$ th second and takes exactly  $M$  seconds to complete one lap.

Your task is to find and return an integer value, representing the least time  $T$  (in seconds) at which these two robots meet each other again at the starting point.

### Sample Input:

2 3 1 4

### Sample Output:

5

### Explanation:

$X=2, N=3, Y=1, M=4$

Robotop starts at  $T=2$  and completes one lap every 3 seconds. Robocop starts at  $T=1$  and completes one lap every 4 seconds. The smallest point where both meet at the starting point is 5 seconds.

### Source Code:

```
x,n,y,m=map(int,input().split())

if x>n:
    x,y=y,x
    n,m=m,n
ans=y-x
pos=0
for pos in range(n):
    if (ans%n+pos*m)%n==0:
        break
if pos!=n:
    print(y+pos*m)
```

RESULT

5 / 5 Test Cases Passed | 100 %