

LCM of two numbers

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LCM (Least Common Multiple) of two numbers is the smallest number which can be divided by both numbers.

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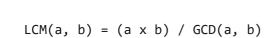
For example, LCM of 15 and 20 is 60, and LCM of 5 and 7 is 35.

A simple solution is to find all prime factors of both numbers, then find union of all factors present in both numbers. Finally, return the product of elements in union.

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An **efficient solution** is based on the below formula for LCM of two numbers 'a' and 'b'.





 $a \times b = LCM(a, b) * GCD (a, b)$



Using GCD, we can find LCM.

? Quiz

Below is the implementation of the above idea:

Python

```
# Python program to find LCM of two numbers

# Recursive function to return gcd of a and b

def gcd(a,b):
    if a == 0:
        return b
        return gcd(b % a, a)

# Function to return LCM of two numbers

def lcm(a,b):
    return (a / gcd(a,b))* b

# Driver program to test above function
a = 15
b = 20
print('LCM of', a, 'and', b, 'is', lcm(a, b))
```

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Output

Dash











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Quiz

LCM of 15 and 20 is 60

Time Complexity: O(log(min(a,b))

Auxiliary Space: O(log(min(a,b))

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