

## Topics to discuss

- LCM of two numbers in Java
- Its time & space complexity.

LCM of Two Numbers

$\text{LCM}(a, b)$  = Smallest Number divisible by both  $a$  and  $b$ .

Example :  $a = 12$  ,  $b = 14$

$$\begin{array}{c|c} 2 & 12, 14 \\ \hline & 6, 7 \end{array}$$

$$2 \times 6 \times 7 = 84$$

$$\text{LCM} = 84$$

$$\text{LCM}(a, b) = a * b / \text{gcd}(a, b)$$

$$\begin{aligned} \text{LCM}(a, b) &= \frac{12 \times \cancel{14} 7}{\cancel{2}} \\ &= 12 \times 7 = 84 \end{aligned}$$

```
static int solution (int a, int b) {  
    int gcd = 1;  
    int min = Math.min(a, b);  
    for (int i = 1 ; i ≤ min ; i++) {  
        if (a % i == 0 && b % i == 0) {  
            gcd = i;  
        }  
    }  
    return a * b / gcd ;  
}
```

```
static int solution2 (a, b) {  
    if (b == 0) return a  
    else return solution2(b, a % b);  
}
```

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**Start Practicing**



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