Euclidean Algorithm

By Prince Agarwal

[“ Hello World ”]

If I told you,

Find GCD of two numbers

Greatest common divisor

Find GCD of 36 and 60 ?

36 = 2 x 2 x 3 x 3
60 = 2 x 2 x 3 x 5

GCD = Multiplication of common factors
= 2 x 2 x 3
= 12

That's why here comes ,

NUMBER THEORY

Euclidean algorithm

That helps to find GCD of two numbers

If we subtract smaller number from larger, GCD doesn't change.

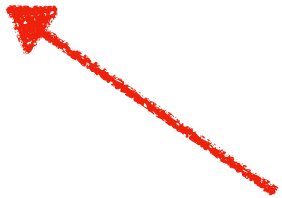
36 & 60

	Similarities
60 - 36 = 24	60 % 36 = 24
36 - 24 = 12	36 % 24 = 12
24 - 12 = 12	24 % 12 = 12
12 - 12 = 0	12 % 12 = 0

GCD of 36 and 60 is = 12

Program of Euclidean algorithm

```
int gcd(int a, int b)
{
 if (a == 0)
   return b;
 return gcd(b % a, a);
}
```



It's a recursive function

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Hello World

“ If you feel any problem then comments in my video
I will reply as soon as possible “

- Prince Agarwal