

GCD or HCF of two numbers

Greatest Common Divisor(GCD)

I/p: a = 4, b = 6

O/p: 2

I/p: a = 100, b = 200

O/p: 100

I/p: a = 7, b = 13

O/p: 1

Euclidean Algorithm

```
def gcd(a, b):  
    while a != b:  
        if a > b:  
            a = a - b  
        else:  
            b = b - a  
    return a
```

a = 12

b = 15

print(gcd(a, b))

Optimised Euclidean Algorithm

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

a = 12

b = 15

print(gcd(a, b))