

2. Find GCD (divident, divisor):

$$\text{divident} = 18$$

$$\text{divisor} = 10$$

$$\text{GCD}(18, 10)$$



$$\text{GCD}(10, (18 \% 10 = 8))$$



$$\text{GCD}(8, (10 \% 8 = 2))$$



$$\text{GCD}(2, (8 \% 2 = 0))$$

Base Case hit

$$\begin{array}{r} 10 \overline{) 18} \quad (1 \text{ } 8 \\ -10 \\ \hline 8 \end{array}$$

$$\begin{array}{r} 8 \overline{) 10} \quad (2 \\ -8 \\ \hline 2 \end{array}$$

$$\begin{array}{r} 2 \overline{) 8} \quad (4 \\ -8 \\ \hline 0 \end{array}$$

Divisor Divident
Base case hit.

divident = 18

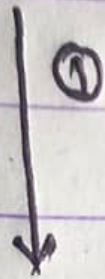
divisor = 10

$(1=2, m)$ $m \geq 0 \times m$ $m \geq 0$

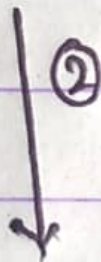
18

method

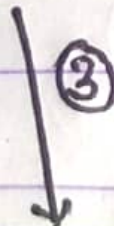
11d. 930) GCD (18, 10)



GCD (10, $(18 \% 10 = 8)$)



GCD (8, $(10 \% 8 = 2)$)



GCD (2, $(8 \% 2 = 0)$)

Base Case hit

[No calculation]

return 2

return 2;

divident = 18

divisor = 10

(18, 10) → 18 % 10 = 8

return 2

To main function;

GCD (18, 10)

①

GCD (10, (18 % 10 = 8))

②

GCD (8, (10 % 8 = 2))

③

GCD (2, (8 % 2 = 0))

Base Case hit