

0 1 1 2 3 5 8 13 21 ---
 1 1 2 3 5 8 13 21
 a b

for(int i = 1; i <= n; i++) {
 int c = a + b;
 a = b;
 b = c;
 }
 cout << a;

$n = 0 + 1 + 1 + 2 + 3 + 5 + 8 + 13 + 21 + \dots$

$c = 1 = 0 + 1$

$a = 1$

$b = 1$

$c = 2$

$a = 1$

$b = 2$

$n = 5$

$1 \times 2 \times 3 \times 4 \times 5 = 120$

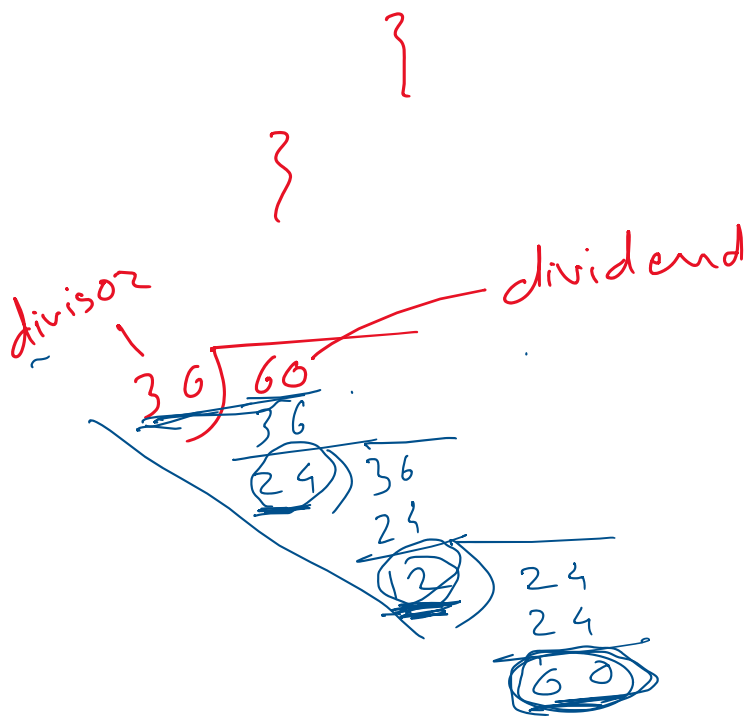
GCD / LCM

$\begin{bmatrix} 12 \\ 6 \end{bmatrix} = \begin{bmatrix} 2 \\ 2 \end{bmatrix} \begin{bmatrix} 3 \\ 3 \end{bmatrix} \begin{bmatrix} 4 \\ 6 \end{bmatrix} \begin{bmatrix} 6 \\ 12 \end{bmatrix}$

GCD

for(int i = 1; i <= small; i++) {
 if(a % i == 0 && b % i == 0) {

$$\text{GCD} = 1$$



$$\begin{array}{r} 60 \overline{) 36} \\ 60 \\ \hline 36 \overline{) 60} \end{array}$$

dividend = 36
divisor = 60
(dividend % divisor != 0)
while (dividend) {
 rem = dividend % divisor
 dividend = divisor
 divisor = rem
}

$$\begin{array}{l} 189 \% 2 = 0 \\ 189 \% 3 = 0 \end{array}$$

2	378 % 2 = 0
3	189 - n
3	63 - n
3	21 - n
7	7 - n

$$2 \ 3 \ 3 \ 3 \ 7$$

$$\begin{array}{l} 63 + 63 + 63 \\ = 189 \end{array}$$

$$\boxed{i \leq n} \quad \text{--- } n$$

↓

$$i \leq n$$

$$\text{if}(n \% i == 0) \{$$