

$\text{fact} = 1 \times 2 \times n = 5$

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for (int i=1; i<=n; i++) {
    fact = fact * i
}
cout <(fact)
  
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$$5! \times 4! \times 3! \times 2! \times 1!$$

$$\begin{aligned} 2 \times 3 &= 6 \\ 6 \times 4 &= 24 \\ 24 \times 5 &= 120 \end{aligned}$$

GCD =

$$\left[\begin{array}{c} 36 \rightarrow (1, 2, 3, 4, 6, 9, 12, 18, 36) \\ 60 \rightarrow (1, 2, 3, 4, 5, 6, 10, 12, 15, 20, 30, 60) \end{array} \right]$$

i is small

$$\left[\begin{array}{c} (n1 \% i == 0 \& \& n2 \% i == 0) \\ GCD = i \end{array} \right]$$

$$\left[\begin{array}{c} n1 = 6 \\ n2 = 12 \end{array} \right]$$

$$GCD = 1 \times 2 \times 3 \times 6$$

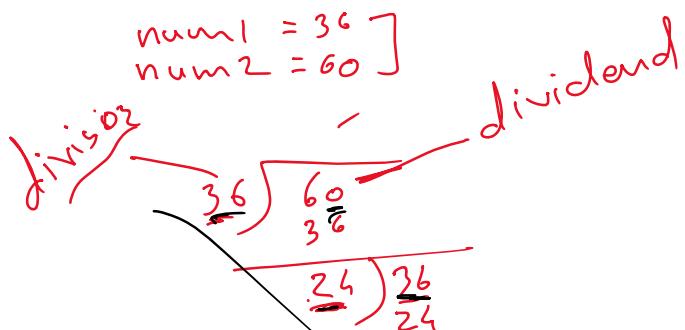
$\text{for } (\text{int } i = 1, i \leq \text{small}; i++) \{$
 $\quad \text{if } (n1 \% i == 0 \& \& n2 \% i == 0) \{$
 $\quad \quad GCD = i$

$$F L = 6$$

}

$$\left| \begin{array}{l} 6 \% 1 == 0 \& \& 12 \% 1 == 0 \\ 6 \% 2 == 0 \& \& 12 \% 2 == 0 \\ 6 \% 3 == 0 \& \& 12 \% 3 == 0 \\ 6 \% 4 == 0 \& \& 12 \% 4 == 0 \\ 6 \% 5 == 0 \& \& 12 \% 5 == 0 \\ 6 \% 6 == 0 \& \& 12 \% 6 == 0 \end{array} \right.$$

$$\left[\begin{array}{c} num1 = 36 \\ num2 = 60 \end{array} \right]$$



rem = dividend % divisor
dividend = divisor

$$\begin{array}{r} \overline{24) \overline{26}} \\ \underline{24} \\ \overline{26} \\ \underline{24} \\ \overline{00} \end{array}$$

dividend = divisor
divisor = rem

$$\begin{array}{r} \overline{60) \overline{36}} \\ \underline{36} \\ \overline{00} \end{array}$$

36 60

$$\begin{array}{r} \overline{60) \overline{36}} \\ \underline{36} \\ \overline{00} \\ \begin{array}{r} \overline{36) \overline{60}} \\ \underline{36} \\ \overline{24} \\ \underline{24} \\ \overline{00} \end{array} \end{array}$$

Qs = dividend % divisor
dividend = divisor
divisor = rem

(dividend % divisor $\underline{\underline{= 0}}$)

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$$\begin{array}{c|c} 2 & \overline{378} \\ \hline 3 & \overline{139} \end{array}$$

	<u>2</u>	<u>378</u>
	<u>3</u>	<u>189</u>
	<u>3</u>	63
	<u>3</u>	21
7	<u>7</u>	7
	<u>7</u>	1
	<u>7</u>	1

$$n = \underline{1852}$$

$$\underline{2581}$$