

$$\textcircled{1} + R = N \quad \Sigma$$

$$R = \textcircled{N - L}$$

$$\textcircled{12} \rightarrow \textcircled{2} \times \textcircled{3}$$

$$(2+1)(1+1) = 6$$

144

$$N = p_1^{\alpha_1} \times p_2^{\alpha_2} \times \dots \times p_k^{\alpha_k}$$

$$\begin{aligned} \text{nod}(N) &= (\alpha_1 + 1)(\alpha_2 + 1) \dots (\alpha_k + 1) \\ &= \prod_{i=1}^k (\alpha_i + 1) \end{aligned}$$

$$12 = 2^2 \times 3$$

$$\textcircled{12} = (\textcircled{2^2 \times 3})^{\textcircled{2}} = 2^{2 \cdot 2} \times 3^{1 \cdot 2}$$

$$N^2 = p_1^{2\alpha_1} \cdot p_2^{2\alpha_2} \cdot \dots \cdot p_k^{2\alpha_k}$$

$$\text{nod}(N^2) = (2\alpha_1 + 1)(2\alpha_2 + 1) \dots (2\alpha_k + 1)$$

$$144 = 2^4 \cdot 3^2$$

$$100 = 2^2 \cdot 5^2$$

$$6 = \boxed{2}, (3)$$

$$1 \leq T \leq 10^5$$

TL: 15

$$1 \leq N \leq 10^6$$

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	2	3	2	5	2	7	2	3	2	11	2	13	2	3
			4		3		4	9	5		3		7	5
					6		8	10			4		14	15
											6			
											12			

$$O(N \log N + T)$$

$$2 \times 10^7$$

```
int divCount[20];
```

```
for(int d=1; d<=N; d++)
```

```
{
    for(int m=d; m<=N; m+=d)
        divCount[m]++;
}
```

$$\frac{N}{1} + \frac{N}{2} + \frac{N}{3} + \frac{N}{4} + \dots$$

$$\begin{aligned}
 & \frac{N}{1} + \frac{N}{2} + \frac{N}{3} + \frac{N}{4} + \dots \quad \{ L \quad \text{divCount}[m]++; \\
 & = N \left(1 + \frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \dots \right) \\
 & = N \cdot \log_2 N
 \end{aligned}$$