

$$\frac{Q}{5}$$

$$\frac{N}{\text{impossible}}$$

$$T = 10^4$$

$$1 \leq Q \leq 10^8$$

$$O(N)$$

$$10! = \overbrace{1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9 \times 10}^{\text{impossible}}$$

$$\dots 0 = \dots \times 10$$

$$10 = 2 \times 5$$

$$1234000 \rightarrow 1234 \times 10^3$$

$$35! = \dots \times \frac{5!}{1} \times \dots \times \frac{10!}{1} \times \dots \times \frac{15!}{1} \times \dots \times \frac{20!}{1} \times \dots \times \frac{25!}{5!} \times \dots \times \frac{30!}{5!} \times \dots \times \frac{35!}{5!}$$

$$f_5(N) = \left\lfloor \frac{N}{5} \right\rfloor + \left\lfloor \frac{N}{5^2} \right\rfloor + \left\lfloor \frac{N}{5^3} \right\rfloor + \left\lfloor \frac{N}{5^4} \right\rfloor + \dots$$

$$= 7 + 1 = 8$$

$$N \geq \text{base}$$

$$\log_5(N)$$

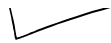
$$\frac{N}{5^k} > 0$$

$$N < 5^{k+1}$$

$$T \times \log_2(Q) \times \log_5(Q) < 10^8$$

$$10^4 \times 38 \times 17$$

$$M \text{ position}$$



M	position
1	1
2	3 ₂
3	5 ₄
4	6
5	6
6	8 ₇
7	8
8	8
9	9
10	14 ₄ → 10, 11, 12, 13, 14
11	20

lower-bound (2)

lower-bound (7)

$M=10$ $cnt=6+5$



<u>1</u>	<u>2</u>	<u>3</u>	4	5	<u>6</u>	10
2	4	6	8	10	12	10 ₂
3 ₁	6 ₂	9 ₃	12 ₄	15 ₅	18 ₆	10 ₃
4	8	12	16	20	24	
5	10	15	20	25	30	