题：We call $x \in N$ a rising number if $x > 10$ and its decimal represention $(a_n a_{n-1} \cdots a_1)$ has the property that $a_{i+1} < a_i$ for all $1 \le i \le n$. For example 14 and 478 are rising. while 5 and 93 are not, How many such rising number bigger than 10^4 are there?

解：升序数(rising number)最大是123456789，首位不能为0，所以只能有九位数，且九位数字只有一个，一组不同数字构升序只有一个。

∴ 大于10^4的升序数为12345—12 56789

也就是5位数至九位数

9位的只有123456789　1个　(123456789)

8位 $\binom{8}{7}+\binom{7}{7} =$ 9个 (12345678—23456789)

$\underbrace{\cdots\cdots}_{7个数}9$　$\underbrace{\cdots\cdots}_{7个数}8$

7位 $\binom{8}{6}+\binom{7}{6}+\binom{6}{6}=36$个 (1234567—3456789)

$\underbrace{\cdots\cdots}_{6个数}9 + \underbrace{\cdots\cdots}_{6个数}8$　$\underbrace{\cdots\cdots}_{6个数}7$

6位 $\binom{8}{5}+\binom{7}{5}+\binom{6}{5}+\binom{5}{5}=84$个 (123456—456789)

$\underbrace{\cdots\cdots}_{5个数}9$　$\underbrace{\cdots\cdots}_{5个数}8$　$\underbrace{\cdots\cdots}_{5个数}7$　$\underbrace{\cdots\cdots}_{5个数}6$

5位 $\binom{8}{4}+\binom{7}{4}+\binom{6}{4}+\binom{5}{4}+\binom{4}{4}=126$ (12345—56789)

个位为9　个位为8.　个位为7.　个位6　个位为5

综上、大于10^4的升序数为：$1+9+36+84+126=256$个