Lucky

Digits 4 and 7 are lucky, while all others are unlucky. An integer is lucky if it contains only lucky digits in decimal notation. We would like to know the K-th lucky positive integer.

Input

The first and only line of input contains a positive integer K ($1 \le K \le 10^9$).

Output

The first and only line of output must contain the K-th lucky positive integer.

Sample input

Sample output

Sample input	Sample output
1	4
2	7
3	44