

is OK to visit the same station more than once in the same day.)

As time goes by, he adds cards for the number of stations where he finds problems, so that he will visit them more often, so the number of cards bearing each digit may vary considerably.

One day he deals out his cards, and notices that they have come out in strictly ascending order. He starts to wonder just how likely such an ordering would be.

Find the number of ways to deal the cards that form a strictly ascending sequence. ("Strictly ascending" in this problem means that, for example [2, 4, 5] would be accepted but [3, 1, 2] and [2, 2, 4] would not.)

Input

The first line of input contains 10 non-negative integers n_i , each denoting the number of cards bearing the number i. The sum of these 10 numbers is in the range $1 \dots 1000$.

This is followed by a line containing an integer K, $1 \le K \le 10$, denoting the number of cards to be dealt.

Output

Print a single line containing an integer denoting the number of ways to deal K cards from that deck that would form a strictly ascending sequence.

Sample Input 1

Sample Output 1



Sample Input 2

Sample Output 2





Sample Input 3

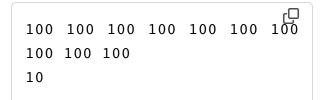
Sample Output 3

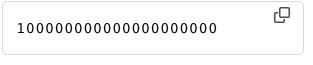




Sample Input 4

Sample Output 4





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