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## From one to en (3)

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Write a program that prints all the permutations of  $\{1, \dots, n\}$  with  $k$  inversions, for a given  $n$  and  $k$ . An inversion is a pair of elements  $x$  and  $y$  such that  $x > y$  and such that  $x$  appears before  $y$  in the permutation.

### Input

Input consists of two natural numbers  $n$  and  $k$ , such that  $n \geq 1$  and  $0 \leq k \leq n(n-1)/2$ .

### Output

Print all the permutations of  $\{1, \dots, n\}$  with  $k$  inversions.

### Information about the checker

You can print the solutions to this exercise in any order.

### Hint

Here, a very simple algorithm may be too slow.

#### Sample input 1

5 2

#### Sample output 1

(1, 2, 4, 5, 3)  
(1, 2, 5, 3, 4)  
(1, 3, 2, 5, 4)  
(1, 3, 4, 2, 5)  
(1, 4, 2, 3, 5)  
(2, 1, 3, 5, 4)  
(2, 1, 4, 3, 5)  
(2, 3, 1, 4, 5)  
(3, 1, 2, 4, 5)

#### Sample input 2

10 45

#### Sample output 2

(10, 9, 8, 7, 6, 5, 4, 3, 2, 1)

### Problem information

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