Computing the exact number of ways that N things can be taken M at a time can be a great challenge when N and/or M become very large. Challenges are the stuff of contests. Therefore, you are to make just such a computation given the following:

GIVEN:

$$5 \leq N \leq 100, \qquad \text{and} \qquad 5 \leq M \leq 100, \qquad \text{and} \qquad M \leq N$$

Compute the **EXACT** value of:

$$C = \frac{N!}{(N-M)! \times M!}$$

You may assume that the final value of C will fit in a 32-bit Pascal LongInt or a C long.

For the record, the exact value of 100! is:

```
93,326,215,443,944,152,681,699,238,856,266,700,490,715,968,264,381,621,
   468,592,963,895,217,599,993,229,915,608,941,463,976,156,518,286,253,
   697,920,827,223,758,251,185,210,916,864,000,000,000,000,000,000,000,000
```

Input

The input to this program will be one or more lines each containing zero or more leading spaces, a value for N, one or more spaces, and a value for M. The last line of the input file will contain a dummy N, M pair with both values equal to zero. Your program should terminate when this line is read.

Output

The output from this program should be in the form:

N `things taken` M `at a time is` C `exactly.`

Sample Input

```
100  6
 20  5
 18  6
  0  0
```

Sample Output

```
100 things taken 6 at a time is 1192052400 exactly.
20 things taken 5 at a time is 15504 exactly.
18 things taken 6 at a time is 18564 exactly.
```