Ticket Payment

Ann has recently started commuting by subway. We know that a one ride subway ticket costs *a* yuans. Besides, Ann found out that she can buy a special ticket for *m* rides (she can buy it several times). It costs *b* yuans. Ann did the math; she will need to use subway *n* times. Help Ann, tell her what is the minimum sum of money she will have to spend to make *n* rides?

**Input**

The single line contains four space-separated integers *n*, *m*, *a*, *b* (1 ≤ *n*, *m*, *a*, *b* ≤ 1000) — the number of rides Ann has planned, the number of rides covered by the *m* ride ticket, the price of a one ride ticket and the price of an *m* ride ticket.

**Output**

Print a single integer — the minimum sum in yuans that Ann will need to spend.

**Examples**

**input**

**Copy**

6 2 1 2

**output**

**Copy**

6

**input**

**Copy**

5 2 2 3

**output**

**Copy**

8

**Note**

In the first sample one of the optimal solutions is: each time buy a one ride ticket. There are other optimal solutions. For example, buy three *m* ride tickets.