Problem B
Extreme couponing

Input File: *testdata.in*
Time Limit: 10 seconds

Problem Description

Have you ever seen a reality TV show called *Extreme couponing*? In the TV show, the contestants do shopping with coupons to purchase groceries of the largest total value. After watching the TV show, Amy wants to be a contestant in the show. But before she can participate, she needs to pass a trial held by the production team.

The trial will be held in a supermarket. Every kind of grocery in the supermarket is marked with its price and the coupon attached. After the participants checkout their purchases, they will receive coupons as which marked on the groceries. The participants can use these coupons for another shopping later on. For example, if Amy has $30 dollars in cash and buy a jar of apple juice selling for a price of $20 dollars with a $5 dollars off coupon, she needs to give $20 dollars, either in cash, coupons or a combination of them, to the cashier and the cashier would give her a $5 dollars off coupon. So she has now $10 dollars in cash and a $5 dollars coupon. Then she can buy something that costs not larger than $15 dollars in the next shopping. There is no limit in the number of shoppings you made. Every participant will be given a limited budget: $m dollars, and a list of groceries' prices and values of coupons. The participant who wants to be the winner needs to maximum the total price of the groceries they bought.

Therefore, your work is to help Amy to verify whether the total price of the groceries she bought is the highest possible. In other words, you need to write a program to compute the largest total price of the groceries that Amy can buy.

Technical Specifications

1. The number of test cases would be smaller than or equal to 20.
2. The number of groceries n would satisfy $1 \leq n \leq 50$.
3. The budget m, the prices of groceries p, and the values of coupons c are positive integers and would be smaller than or equal to 5000.

Input Format

There are multiple input cases. A pair of 0 and 0 ends the input file. The first line of the input file contains an integer indicating the number of test cases to follow. In each test case, the first contains two integers m and n, separated by spaces. After that, the test case contains n lines, each line with two numbers price p and coupon c, separated by a single blank.

Output Format

For each test case, output the largest total price of the purchases.

Sample Input

```
20 2
20 15
10 5
30 3
25 15
30 20
10 5
0 0
```

Sample Output

```
40
60
```