J Stock

Optiver sponsored problem.

After years of hard work Optiver has developed a mathematical model that allows them to predict wether or not a company will be succesful. This obviously gives them a great advantage on the stock market.

In the past, Optiver made a deal with a big company, which forces them to buy shares of the company according to a fixed schedule. Unfortunately, Optiver's model has determined that the company will go bankrupt after exactly n days, after which their shares will become worthless.

Still, Optiver holds a large number of sell options that allows them to sell some of the shares before the company goes bankrupt. However, there is a limit on the number of shares Optiver can sell every day, and price Optiver receives for a share may vary from day to day. Therefore, it is not immediately clear when Optiver should sell their shares to maximize their profit, so they asked you to write a program to calculcate this.

Input

On the first line an integer t ($1 \leq t \leq 100$): the number of test cases. Then for each test case:

- One line with an integer n ($1 \leq n \leq 100\,000$): the number of days before the company goes bankrupt.
- n lines with three integers x_i ($0 \leq x_i \leq 100$), p_i ($0 \leq p_i \leq 100$) and m_i ($0 \leq m_i \leq 10\,000\,000$): the number of shares Optiver receives on day i, the (selling) price per share on day i, and the maximum number of shares Optiver can sell on day i, respectively.

Output

For each test case:

- One line with the maximum profit Optiver can achieve.

Sample in- and output

Input	Output
1 6 4 4 2 2 9 3 2 6 3 2 5 9 2 2 2 2 3 3	76