

A group of friends started playing Minecraft together, their goal is to mine resources and build facilities, in case they decided to demolish or destroy something they built because they don't need it, the resources used to build that facilities are not lost but they get it back and can use it further in the game.

One day they invited Mouad to start playing with them(Minecraft), But Mouad has little experience in gaming, in the other hand he was well knowledge in programming and problem solving. When he joined his group of friends they had a resources problem, Mouad decided to help them, first he noticed that they wasted some resources while connecting all their buildings (every building has a direct road to another one), since Mouad is so lazy and quite noob, he decided to program a bot which will solve their lack of resources problem.

He programmed the bot to destroy any unnecessary roads and obtain the maximum amount of resources but must maintain all building connected (not necessarily directly connected, but you can travel from any building to another one). The bot will also store all the obtained resources in a specific chest.

Mouad got bored of the game, so he decided to take a break, his friends wanted to check the chest to and make sure no one stole any of the resources.

Given the amount of resources used to connect each two buildings and knowing the bot will acquire the maximum amount of resources without leaving any building isolated. Write a program that will print the amount of resources acquired by the bot after finishing his mission.

Input:

The first line of the input contains one Integer **T** ($1 \leq T \leq 20$), number of test cases.

The first line of each test case contains one Integer **V** ($3 \leq V \leq 100$) the number of buildings Then $V*(V-1)/2$ lines follow.

Each line follows the format "**a b c**" ($0 \leq a \leq b < V$) ($1 \leq c \leq 10^9$) representing a road from **a** to **b** with amount of resources used to build the road is **c**.

Output :

For each test case print one single line containing the amount of resources the bot will acquire after finishing his mission.