



LEVEL 5

**Glowy:**

Considering how much help I was to you already, I am being paid way too little.

It reminds me about my time in Germany. Damn, wages were crap there. I was being paid 2 tickle-watts per hour. Had a great friend working at a hydroelectric plant there, an electrician of course. He never complained about his salary. He would drive this really cool car which had a special place in the trunk just for tools and test-bulbs (that was my job).

... it was a Volts-wagon

**Glowy:**

But in all seriousness, check this out.

**Additional info**

Only a given amount of tasks can run at the same minute

**Task for Level 5:**

same like Level 4 while also fulfilling the concurrent task
constraint



- › You are given a maximum amount of tasks that can draw power at the same minute.
- › The power threshold from Level 4 still cannot be exceeded.
- › The maximum electricity bill still cannot be exceeded.
- › The solution does not have to be optimal, every solution that fulfills all constraints is valid.

	Input	Output
Format	<code>maxPower</code> <code>maxElectricityBill</code> <code>maxConcurrentTasks</code> <code>N</code> <code>price</code> (repeats <code>N</code> times) <code>M</code> <code>taskId power startInterval endInterval</code> (repeats <code>M</code> times)	<code>M</code> <code>taskId minuteId power minuteId2 power2 ...</code> (repeats <code>N</code> times) same as Level 4
Types	<code>maxPower</code> (int) maximum power that can be drawn at any given minute by all tasks combined <code>maxElectricityBill</code> (long) maximum electricity bill <code>maxConcurrentTasks</code> (int) maximum tasks that can draw power at the same time <code>N</code> (int) number of minutes that follow <code>price</code> (int) price of power at that minute <code>M</code> (int) Number of tasks that follow <code>taskId</code> (int) id of the task starting at 1 <code>power</code> (int) the amount of power the task has to draw to be completed <code>startInterval</code> (int) the id of the first minute that power can be drawn for this task <code>endInterval</code> (int) the id of the last minute that power can be drawn for this task	<code>M</code> (int) Number of tasks that follow <code>taskId</code> (int) id of the task <code>minuteId</code> (int) id of the minute the task is drawing power <code>power</code> (int) amount of power that is drawn for the given minute

	Input	Output
Example	<pre>3 100000 2 20 6618 9119 9865 8182 7523 6877 7141 6647 7705 6636 7333 4994 4771 3991 2811 3205 2448 4377 3427 5607 5 1 1 6 9 2 2 8 19 3 2 7 16 4 7 6 13 5 3 14 18</pre>	<pre>5 1 9 1 2 14 1 15 1 3 14 2 4 13 3 12 3 11 1 5 16 3</pre>



SMARTGRID

GOOD LUCK