

A complex, futuristic digital environment. The scene is filled with numerous monitors and screens of various sizes, some displaying the word "CHECK" in green, others showing abstract patterns or cityscapes. The background is a dense network of black cables and glowing green and blue lights, creating a high-tech, cybernetic atmosphere. The overall color palette is dominated by dark blues, purples, and greens, with bright highlights from the screens and lights.

LEVEL 4

**Glowy:**

But life isn't fair. Nor linear for that matter. The more you take, the more it ends up costing. The more you get, the less you care about it.

This hedonic treadmill ... so many people get caught it in, every single moment!

Take a fridge friend of mine. He started harassing electricity one time - never stopped. Wanted more and more. Soon enough, they caught him and locked him up. And what did they charge him with?

***repeated abuse of power ...***

**Glowy:**

Where would you be without a bit of math... ?

... and without me

**Additional info**

The power price of each minute increases based on the power that is drawn at that minute

**Task for Level 6:**  
same like Level 5 with new electricity bill calculation

- › Input and output format is equal to Level 5
- › The power price for any given minute is now increased 1% for each percent of the maximum power that is drawn at that minute.
- › Example:
  - ›  $\text{maxPower}$  is 10.
  - › The price for a given minute is 25.
  - › If the power consumption at this minute is 5 then 50% of the maximum capacity is drawn, so the power price increases to 37.5 (25 + 50%) per unit, and the cost for that 5 units is 187.5 (5 \* 37.5) in total. Cost for all power that is drawn at any minute will be rounded to the next integer, in that case that would be 188.

$$\text{price} = \text{basePrice} * \left( 1 + \frac{\text{powerConsumed}}{\text{maxPower}} \right)$$

	Input	Output
Format	<code>maxPower</code> <code>maxElectricityBill</code> <code>maxConcurrentTasks</code> <code>N</code> <code>price(repeats N times)</code> <code>M</code> <code>taskId power startInterval endInterval (repeats M times)</code>	<code>M</code> <code>taskId minuteId power minuteId2 power2 ...</code> (repeats N times)  same as Level 4 & 5
Types	<code>maxPower (int)</code> maximum power that can be drawn at any given minute by all tasks combined <code>maxElectricityBill (long)</code> maximum electricity bill <code>maxConcurrentTasks (int)</code> maximum tasks that can draw power at the same time <code>N (int)</code> number of minutes that follow <code>price (int)</code> price of power at that minute <code>M (int)</code> Number of tasks that follow <code>taskId (int)</code> id of the task starting at 1 <code>power (int)</code> the amount of power the task has to draw to be completed <code>startInterval (int)</code> the id of the first minute that power can be drawn for this task <code>endInterval (int)</code> the id of the last minute that power can be drawn for this task	<code>M (int)</code> Number of tasks that follow <code>taskId (int)</code> id of the task <code>minuteId (int)</code> id of the minute the task is drawing power <code>power (int)</code> amount of power that is drawn for the given minute



	Input	Output
Example	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	5 1 9 1 2 14 1 15 1 3 14 2 4 13 3 12 3 11 1 5 16 3

The electricity bill for the example solution would be 69885



# SMARTGRID

GOOD LUCK