Dear Team 1

1- By increasing over time from 20 to 40 we reduce our costs from 360400000 to 356450000. That is a 3950000 reduction in costs which is considered as the value of flexibility. Our employees have produced 1250 thousand units over time. If we want to pay all our savings back to the workers then 3950000/1250000 = 3.16 per product. That is around $18 per hour. It can be also translated as up to 3950000/1250/12= 263 extra salaries per employee per month. Paying under 30+18 = $48 per hour overtime is at our benefit. 48 is known as the shadow price or opportunity cost of overtime. (The same can be applied to 3200+263 as the shadow price of employee salary). It added value to your report if you have spelled this out as the value of overtime flexibility.

2- It could add value to your report if you had a graph of overtime over the 6 months. It would have added to your report if you had a table like this

3-  A table with three rows (1200, 1250, 1300), and two columns (20 and 40) and the corresponding costs similar to what I have made in my solution for this project could add value to your report. In general, we have 4 layers of representation and communication. Writing, Tables, graphs, and equations. One takeaway that I recommend for this course is to replace parts of writings with tables, graphs, and equations (equations like little’s law)

|  |  |  |
| --- | --- | --- |
|  | 20 | 40 |
| 1200 | 363324000 | 357422000 |
| 1250 | 360400000 | 356450000 |
| 1300 | 358790000 | 356270000 |

4- It could have added value to your report if you had a short analysis of what are the benefits and costs of having a constraint on the total volume of production per month to make it closer to a level production plan.

I have posted my excel sheet below

