

IE375 Fall 2020 Case 2

Coco's Toys Comments

General Comments:

- I would not place elimination of computational mistakes as the priority. However, obtaining negative values for example for cycle times or similar is intolerable in assignments as well as the exams.
- Make sure that you work as if somebody after you can replicate what you have done. If you do not approach this way, you will always work more and get less.
- Make sure that when you are using a formula, all the quantities have comparable units.
- Adding apples and oranges – make sure why you are doing and if you think it is reasonable, be consistent on all aspect while adding and always come back to oranges and apples at the end.

PART A Production Planning

I am extremely disappointed in some of the submitted solutions. Please make sure that you read what is asked.

- Nothing was asked with respect to aggregation.
- You were asked to formulate a model.
- Some of you have serious problems with modeling.
- Nothing was said with respect to requiring integer values for the decision variables.
- You must understand the output of an LP model.
- Please, see the solution.

PART B Material Ordering Policy

- Simple implementation of powers-of-two policy for each item. I only expected you to read the part and solve the problem.
- Implementation of the rotation cycle policy or you can convert it to a powers-of-two policy, but this time with a unique cycle time for all items.
- Comparison requires unit costs, as well as they are different in this alternative.

Part C Automation of Production

- Capacity determination – finding maximum demand which can be handled. Similar question was asked in Part A. This one here is simpler.
- Application of a rotational cycle policy – how difficult can it be? Computation of $T_{\min}$ is mostly ignored.
- Calculation of uptime
- Calculation of total cost – simply make sure that all elements are included (annual maintenance, unit production cost, etc.)
- If I asked one further step, that would be about the investment decision: should we take this option or not.