

Math-484 Homework #8 - cheap student

I will finish this homework before 11 am Nov 2 and bring it to class. I will write clearly and neatly as the grader is not an expert in cryptography. I will sign each paper of my work.

Exercise 1: *(Can I use (LP)?)*

Solve the Diet problem for yourself! You may follow these steps:

- Pick at least five nutrients (like calories, fat, salt, sugar, vitamin A, vitamin C,...)
- Find out what is your recommended daily intake of the nutrients. *(Check at least two sources.)*
- Find out what is your recommended maximum daily intake of the nutrients.
- Go to your favorite shop and pick at least 15 different kinds of food. *(Not 15× cookies!)*
- Summarize what is the amount of the nutrients in each of the food.
- Formulate a linear program for finding a diet for one year such that:
 - the cost of food is minimized
 - you get at least recommended daily intake
 - you do not get more then the recommended maximum daily intake
- Find a software package which can solve your *(LP)*.
- Solve your Diet problem using the solver.
- Summarize the results.
- Bonus task for those who are curious - what is the solution if you change recommended daily intake to minimum recommended daily intake? **(D14 students are all curious)**

More notes - provide references ([http links](#)) to anything you are using. Include also the formulation of *(LP)* which you were using as an input for your solver. Also briefly describe how to use the solver and what you liked and hated about it. It is assumed that the homework will be typed.