ITEC451
Activity 13

[Linear Programming] A Diet Problem (Pages 68~70 of the textbook)

- My diet requires that all the food I get come from one of the four "basic food groups".
- At present, the following four foods are available for consumption: brownies, chocolate ice cream, cola and pineapple cheesecake.
- Each brownie costs 50¢, each scoop of ice cream costs 20¢, each bottle of cola costs 30¢, and each piece of pineapple cheesecake costs 80¢.
- Each day, I must ingest at least 500 calories, 6 oz of chocolate, 10 oz of sugar, and 8 oz of fat.
- The nutritional content per unit of each food is given.

Type of Food	Calories	Chocolate (Ounces)	Sugar (Ounces)	Fat (Ounce)
Brownie	400	3	2	2
Chocolate ice cream (1 scoop)	200	2	2	4
Cola (1 bottle)	150	0	4	1
Pineapple cheesecake (1 piece)	500	0	4	5

- Formulate a linear programming model that can be used to satisfy my daily nutritional requirements at minimum cost.