

CANDY Project

I am an athlete with a sweet tooth and it's October so I know I can't resist the trick or treat candy my mom bought. I have figured out that I can afford to use 750 of my daily calories on candy bars. As long as I eat less and or equal to 750 calories I will be okay. I am also watching my sodium and I know the maximum sodium I can afford to consume in the candy is 250 mg. Because I like variety in my diet, I would like to make sure I am eating more than one type of candy. So, I want the number of candy bars of any type to be less than or equal to twice the amount of candy bars of the other type. What is the maximum amount of miniature candy bars I can eat.

1. What are your variables?
2. For each type of candy you choose list the amount of calories per bar (piece).
3. For each type of candy you choose list the amount of sodium per bar (piece).
4. Write the inequalities you get from the constraints on the number of calories and the amount of sodium you are allowed.
5. Write the inequalities you get from the fact that you don't want too much of any one type of candy.
6. Graph the solution region for the inequalities.
7. List the possible solutions and identify the maximum number of bars.
8. If you eat the maximum number of bars, what will your total calorie and sodium intake be from the candy?