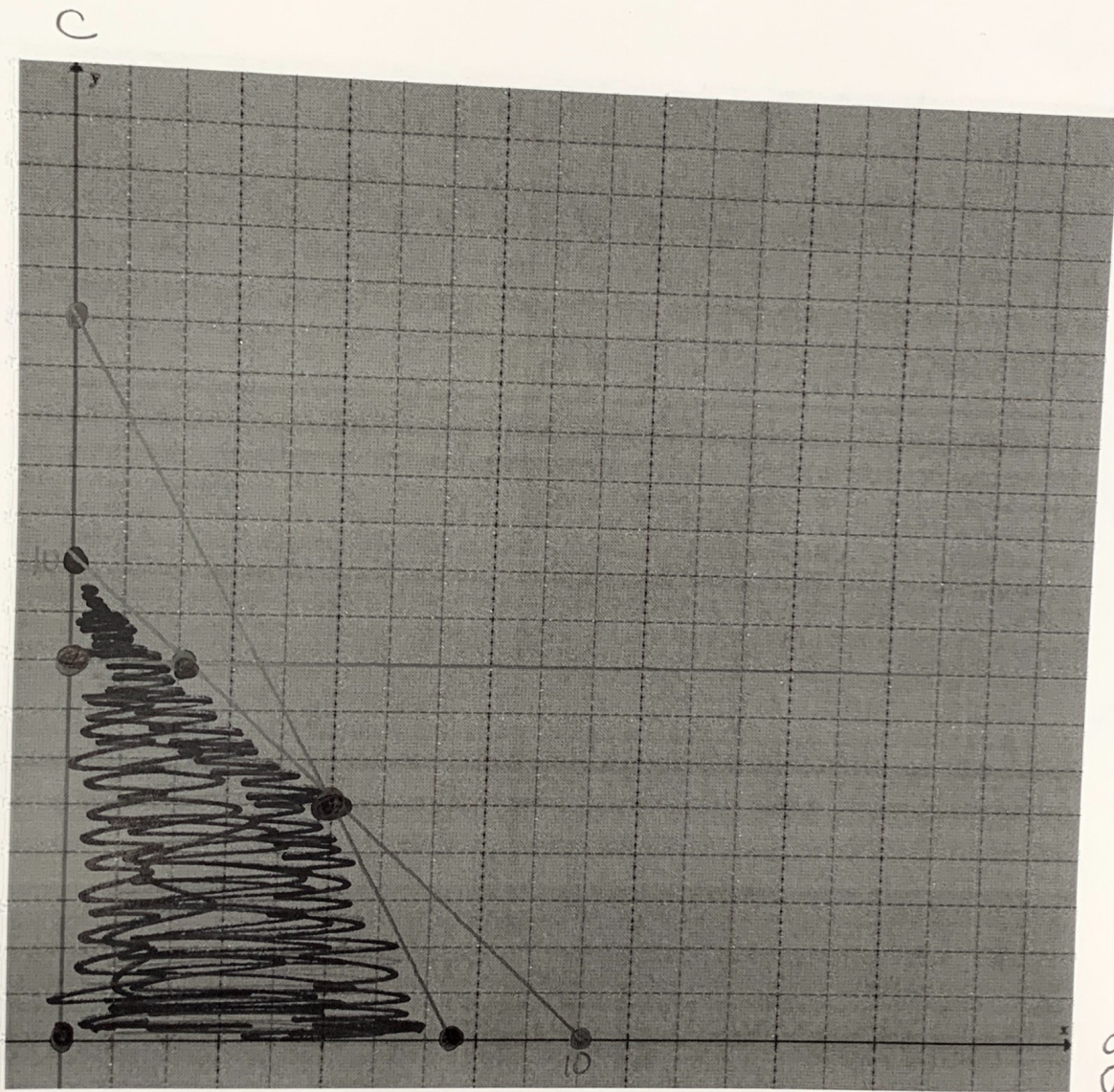


2. Mr. Lochel is making holiday cookies to sell and the profit will go to help St. Christopher's Hospital. He makes sugar and chocolate chip cookies. Each batch of sugar cookies uses one pound of sugar and two pounds of butter, and each batch of chocolate chip cookies uses one pound of sugar, one pound of butter, and one pound of chocolate chips. He makes \$4.00 profit on each batch of sugar cookies and \$5.00 profit on each batch of chocolate chip cookies. He has 10 pounds of sugar, 15 pounds of butter and 8 pounds of chocolate chips. How many batches of each kind of cookie should he bake to make the maximum profit possible for the hospital?



	Sugar	Butter	Chocolate Chips
SSC	1	2	0
CC	1	1	1
Total	10	15	8

$$\begin{aligned}
 g + c &\leq 10 \\
 2g + c &\leq 15 \\
 c &\leq 8 \\
 c &\geq 0 \\
 g &\geq 0
 \end{aligned}$$

Vertices of F.R.

$$\begin{aligned}
 (0,0) &= 0 \\
 (7.5,0) &= 30 \\
 (5,5) &= 45 \\
 (2,8) &= 48 \\
 (0,8) &= 40
 \end{aligned}$$

Optimization Equation

$$P = 4g + 5c$$

2 batches sugar and 8 batches of CC = \$48