

Example 2: Choose values for the variables:

X = number of pills of brand A

Y = number of pills of brand B

subject to the constraints:

$$40X + 10Y \geq 2400 \quad (\text{Iron})$$

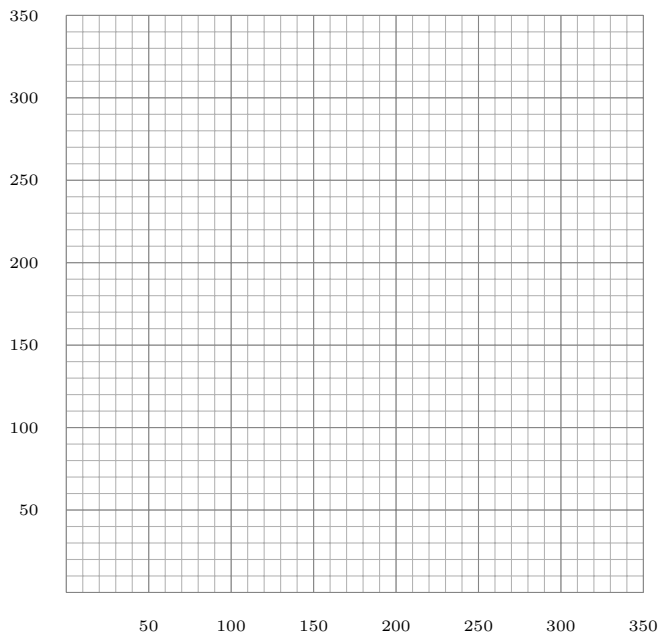
$$10X + 15Y \geq 2100 \quad (\text{B1})$$

$$5X + 15Y \geq 1500 \quad (\text{B2})$$

and $X \geq 0, Y \geq 0$

in order to meet our objective to minimize cost $C = 0.06X + 0.08Y$.

Solve the problem by completing the following steps.



X	Y	C

- Graph the equations. (Pick two points on the line, then draw it, then label it clearly.)
- Shade the correct region. (Choose a point in each region, and check if it works in all of the constraints.)
- Find the corners. (In this case, all the corners are even, so just eyeball it.)
- Check the corners. (Plugin the corners into the cost function.)
- Check the corner that isn't there. (Big X and/or Big Y just means big cost.)
- Choose the cheapest corner, and describe what the client should go do.

