

Let x be the number of road bikes, y be the number of mountain bikes.

$$x + 1.5y \leq 150 \quad 600x + 450y \leq 72000$$

$$2x + 3y \leq 300 \quad 60x + 45y \leq 7200$$

$$y \leq 60$$

$$\begin{aligned} \textcircled{1} \quad & x + 1.5y = 150 \quad \textcircled{1} \\ \textcircled{2} \quad & 600x + 450y = 72000 \end{aligned}$$

$$\textcircled{2} \quad y = 60 \quad \textcircled{2}$$

Consider $(90, 40)$ use it

$$\begin{aligned} x + 1.5(60) &= 150 \\ x &= 60 \end{aligned}$$

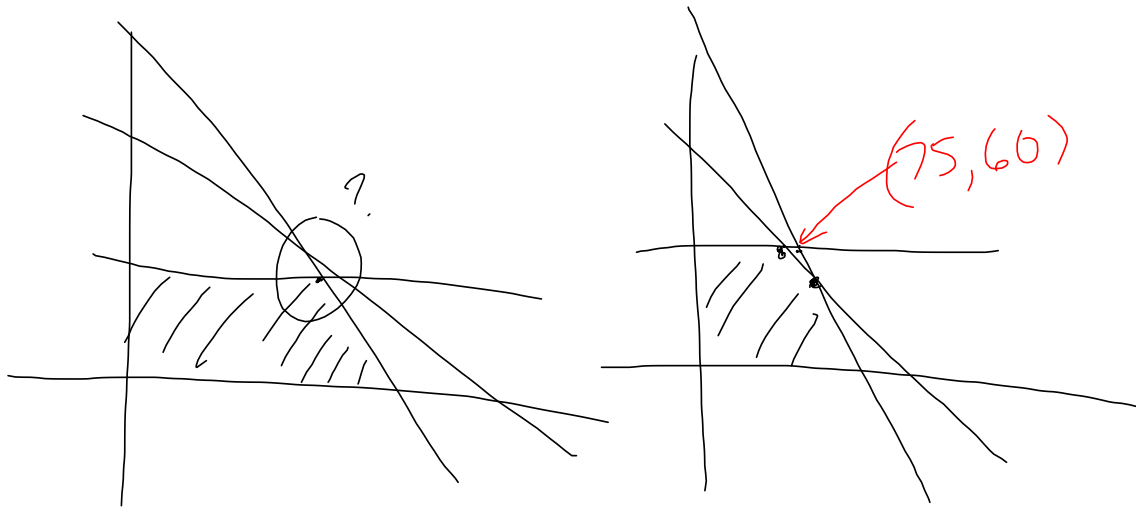
$(60, 60)$ Consider, use

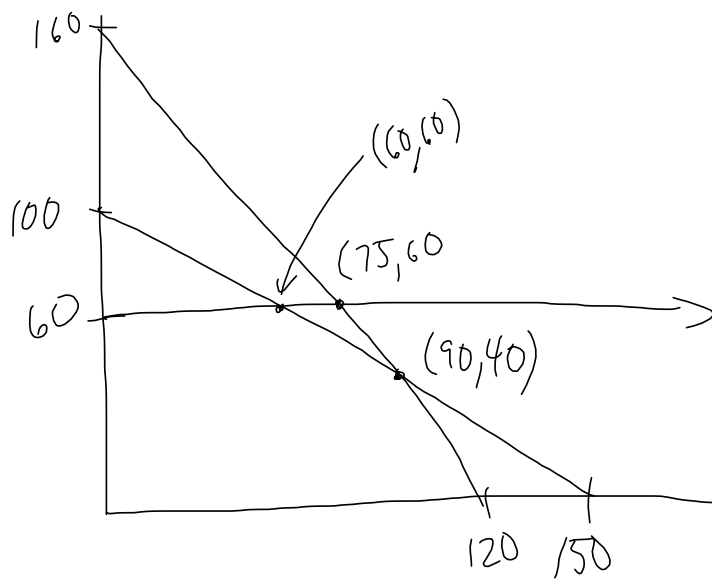
$$\begin{aligned} -600x - 900y &= -90,000 \\ 600x + 450y &= 72,000 \\ -450y &= -18,000 \\ y &= 40 \end{aligned}$$

$$\begin{aligned} 600x + 450(60) &= 72,000 \\ 600x + 27000 &= 72,000 \\ 600x &= 45,000 \end{aligned}$$

$$\begin{aligned} y = 40 &\rightarrow x + 1.5(40) = 150 \\ &x = 90 \end{aligned}$$

~~$x = 75$
 $y = 60$~~





~~$y \leq 60$~~

He'll stock more mtn bikes, but never more than twice the # of road bikes.

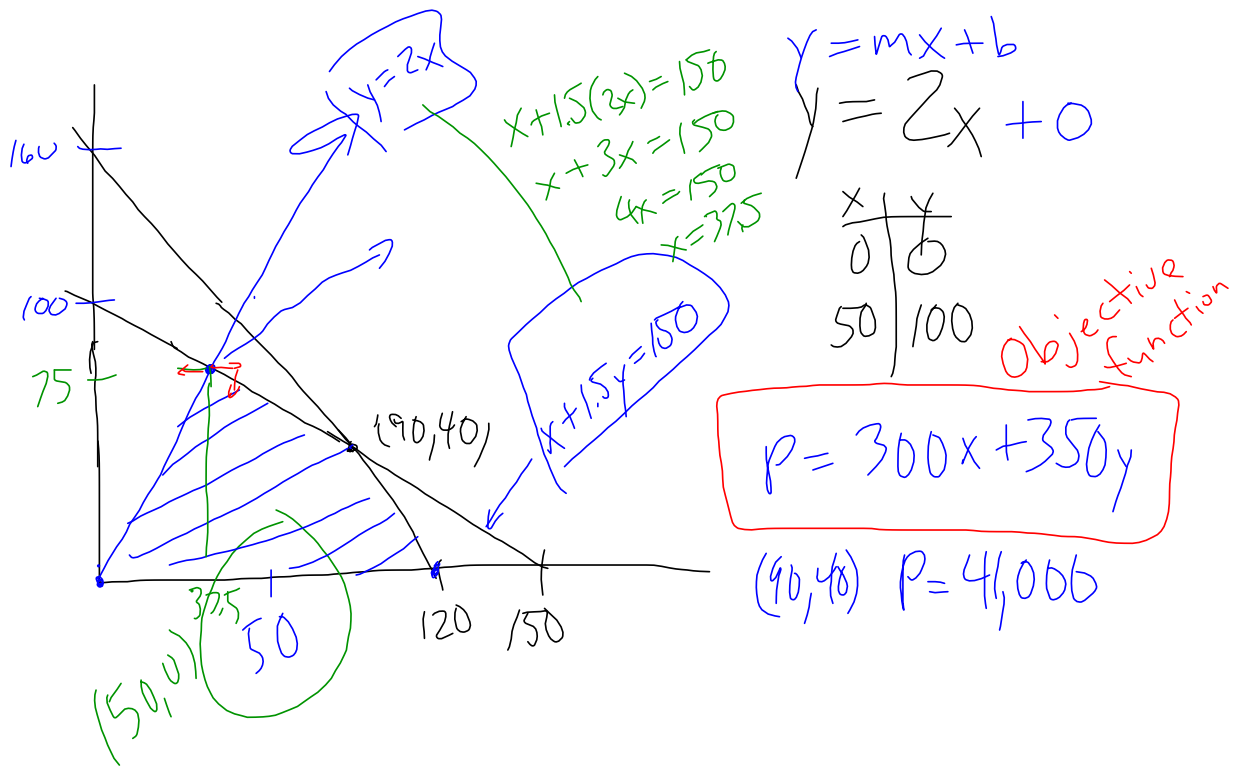
20 → 40
road mtn

~~20/4~~

$$\cancel{2x \leq y}$$

$$2x \geq y$$

$$\cancel{x \leq 2y}$$
$$\cancel{x \geq 2y}$$



Let x be the number of type I bolt and y is the number of type II bolts.

$$x = 100$$

$$y = 200$$

Machine 1

$$.2(100) + .2(200) = 20 + 40 = 60$$

$$.2x + .2y \leq 300$$