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~~Problem 28~~

$$A = \begin{bmatrix} 4 & 1 & 3 \\ 2 & 4 & 0 \\ 0 & 1 & 2 \end{bmatrix}$$

$$D = \begin{bmatrix} 4 \\ 6 \\ 5 \end{bmatrix}$$

$$I - A = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix} - \begin{bmatrix} 4 & 1 & 3 \\ 2 & 4 & 0 \\ 0 & 1 & 2 \end{bmatrix}$$

$$= \begin{bmatrix} -3 & -1 & -3 \\ -2 & -3 & 0 \\ 0 & -1 & -1 \end{bmatrix}$$

Find the inverse of the above matrix $(I-A)$.

Find $(I-A)^{-1} \cdot D$ to get the production matrix X .

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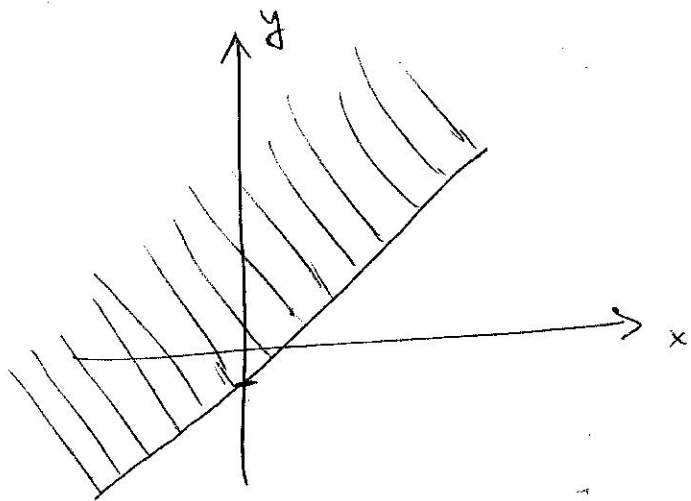
$$2x - 3y \geq 4$$

$$-3y \geq -2x + 4$$

$$y \geq \frac{2}{3}x - \frac{4}{3}$$

$(0,0)$ ✓

$$0 \geq -\frac{4}{3}$$



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$$3x + 5y < 15$$

$$\Rightarrow 5y < -3x + 15$$

$$y < -\frac{3}{5}x + 3$$

$(0,0)$

$$0 < 3$$

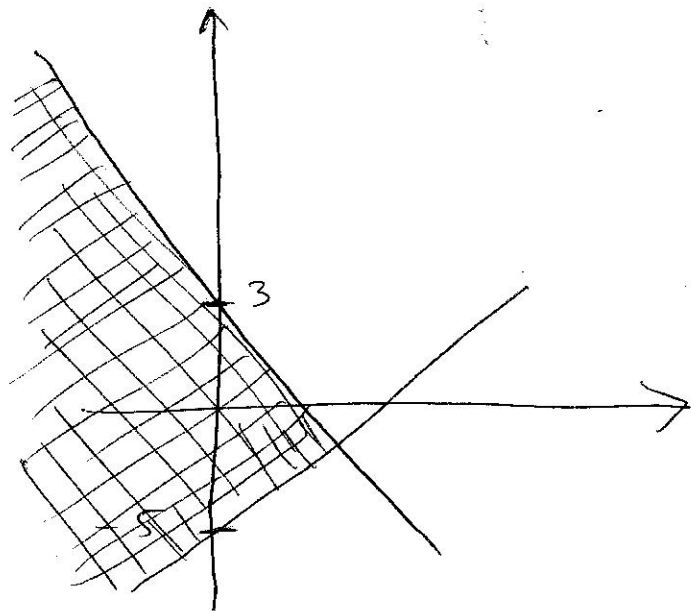
$$5x - 5y < 25$$

$$x - y < 5$$

$$y > x - 5$$

$(0,0)$

$$0 > -5$$



31 Done in class.

32 Done in class.