Preliminary problems. These problems should be completed before discussion on Thursday.

(P1) Draw $\mathbb{F}_3^2$, the 2-dimensional vector space over $\mathbb{F}_3$. Circle the points in the line $\text{span}\{(1, 2)\}$, and box the points in the translated line $(2, 1) + \text{span}\{(1, 1)\}$.

(P2) Solve the following system of linear equations in $\mathbb{F}_5$ *algebraically* (i.e. by standard equation manipulation). Identify where in the solving process you used division.

$$2x + 3y = 3 \qquad\qquad 3x + 4y = 3$$