$\langle P_3, P_2, \rangle$

$$Q = \begin{bmatrix} 3 & 0 & 4 & 2 \\ 1 & 1 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 1 & 2 & 4 & 2 \end{bmatrix} \begin{matrix} P_1 \\ P_2 \\ P_3 \\ P_4 \end{matrix}$$

$$A = \begin{bmatrix} 0 & 3 & 2 & 2 \\ 1 & 0 & 2 & 0 \\ 1 & 0 & 1 & 0 \\ 1 & 1 & 1 & 2 \end{bmatrix} \begin{matrix} P_1 \\ P_2 \\ P_3 \\ P_4 \end{matrix}$$

$$V = [\,0 \quad 1 \quad 0 \quad 0\,]$$

$P_1 = 3042 \leq 0100$ ✗

$P_2 = 1100 \leq 0100$ ✗

$P_3 = 0100 \leq 0100$ ✓

$V = 0100$

$+\ 1010$ ← P_3 Allocation

1110

$P_4 = 1242 \leq 1110$ ✗

$P_1 = 3042 \leq 1110$ ✗

$P_2 = 1100 \leq 1110$ ✓

$V = 1110$

$+\ 1020$

2130

$P_4 = 1242 \leq 2130$ ✗

$P_1 = 3042 \leq 2130$ ✗

① $R = A + V = [3 \quad 5 \quad 6 \quad 4]$

② ↳ 2130

③ P_1, P_4