Number of Task = 3 $\begin{bmatrix} T_0 & T_1 & T_2 \end{bmatrix}$

Number of process : 2 $\begin{pmatrix} P_0 & P_1 \end{pmatrix}$.

| Energy | $P_0$ | $P_1$ |
|--------|-------|-------|
| $T_0$  | 8     | 2     |
| $T_1$  | 4     | 3     |
| $T_2$  | 6     | 7     |

| EX Time | $P_0$ | $P_1$ |
|---------|-------|-------|
| $T_0$   | 10    | 15    |
| $T_1$   | 24    | 30    |
| $T_2$   | 44    | 30    |

| comm cost | $T_0$ | $T_1$ | $T_2$ |
|-----------|-------|-------|-------|
| $T_0$     | 0     | 8     | 12    |
| $T_1$     | 8     | 0     | 6     |
| $T_2$     | 12    | 6     | 0     |

Random Inial sol$^n$ = $\begin{bmatrix} 0 & 0 & 0 \end{bmatrix}$

$P_0 \sim D$  $P_1 \sim 1$

$T_0$  $T_1$  $T_2$.



$P_0$
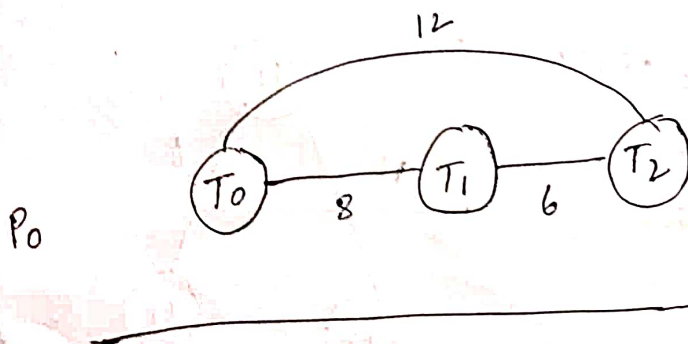
$P_1$

gain calculation

$\boxed{T_0} \Rightarrow [8] - [2 + 20] = -14.$

$\boxed{T_1} \Rightarrow [4] - [3 + 14] = -13$

$\boxed{T_2} \Rightarrow [6] - [7 + 18] = -19.$

$\boxed{Max\ gain = -13}$

Temp Move $T_1$ from $P_0 \to P_1$ to check constrai

$$\Sigma_{P_0} = 54 = 44 + 10$$

$$\Sigma_{P_1} = 30$$

$$|\Sigma_{P_0} - \Sigma_{P_1}| = 24 < 100$$

Constraint Bonded
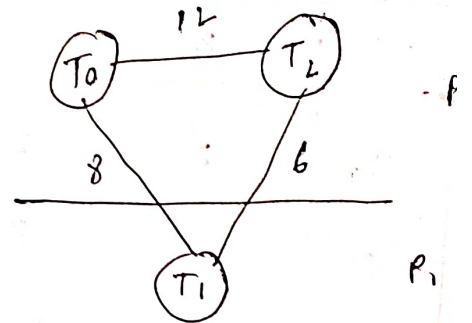
Move $\boxed{T_1}$ from $P_0 \to P_1$.

New sol$^n$ = $\begin{bmatrix} 0 & 1 & 0 \end{bmatrix}$

$G = g_1 = 31$ for $K = 1$.

Total-cost = 31

(now)   (maybe)

$\boxed{T_0} \Rightarrow [8+8] - [2+12] = 2$

Max gain = 2

$\boxed{T_2} \Rightarrow [6+6] - [7+12] = -7$

Temp Move $T_0$ from $P_0 \to P_1$ to check constraint

$$\Sigma_{P_0} = 44 \qquad \Sigma_{P_1} = 15 + 30 = 45$$

$$|\Sigma_{P_0} - \Sigma_{P_1}| = 5 < 100$$

Constraint Bonded

move $\boxed{T_0}$ from $P_0 \to P_1$.
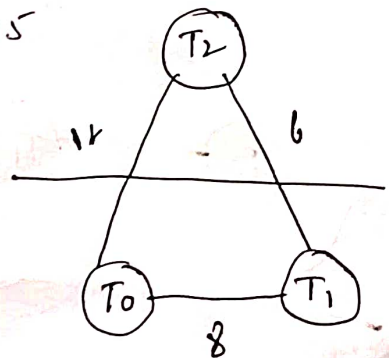
New -sol$^n$ = $\begin{bmatrix} 1 & 1 & 0 \end{bmatrix}$

$G = g_1 + g_2 = 29$ for $K = 2$

Total-cost = 29

$T_2 \Rightarrow \left[6+12+6\right] - \left[\not{7}\right] = 17$

$$\boxed{\text{Max gain} = 17}$$

Temp · Move $T_2$ from $P_0 \rightarrow P_1$.

$\sum P_0 = 0$  $\sum P_1 = 30 + 30 + 15 = 75$



$\left| \sum P_0 - \sum P_1 \right| = 75 < 100$

$$\boxed{\text{Constraint Bounded}}$$
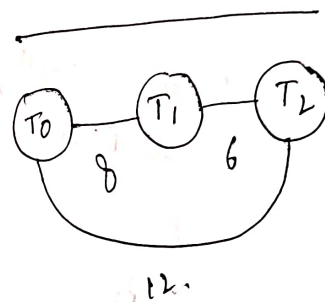
move $\boxed{T_2}$ from $P_0 \rightarrow P_1$.

New-so$^{ln}$ = $\begin{bmatrix} 1 & 1 & 1 \end{bmatrix}$

$$\boxed{G = g_1 + g_2 + g_3 = \not{12} \text{ for } K = 3.}$$
$$\boxed{\text{Total-cost} = 12}$$
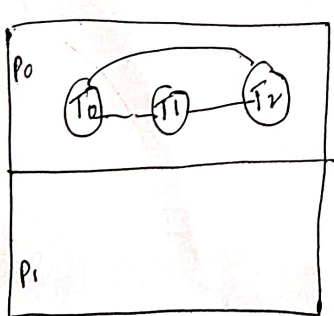


Initial.

$T_1$ Moved
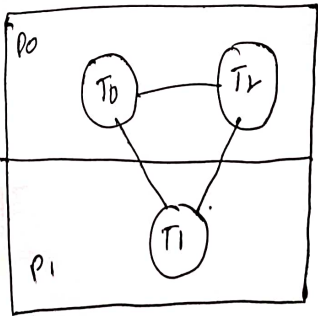
$K = 1$  $G = g_1$

$J_0$ Moved
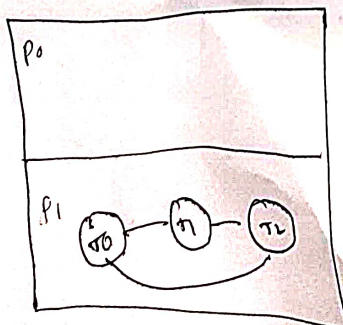
$T_2$ Moved

$K = 3$  $G = g_2 + g_1 + g_3$.
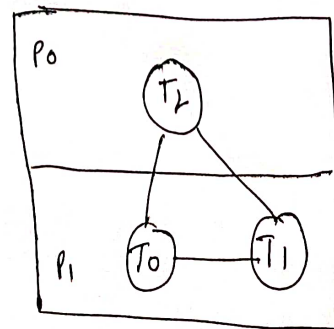
$K = 2$  $G = g_1 + g_2$

Unlock every Task

choose Minimum Total cost at value K

At $K = 3$, $G = 6$.

$G_1 = g = -13$

$\therefore g_1 + g_2 = -13 + 2 = -11$

$$\boxed{G = g_1 + g_1 + g_3 = -13 + 2 + 17 = 6.}$$

for $K = 3$

SO, Final soln, $\begin{bmatrix} 1 & 1 & 1 \end{bmatrix}$
at $K = 3$.



$P_0$

$P_1$

Total-cost = 12

$|\Sigma P_0 - \Sigma P_1| = 75 < 100$