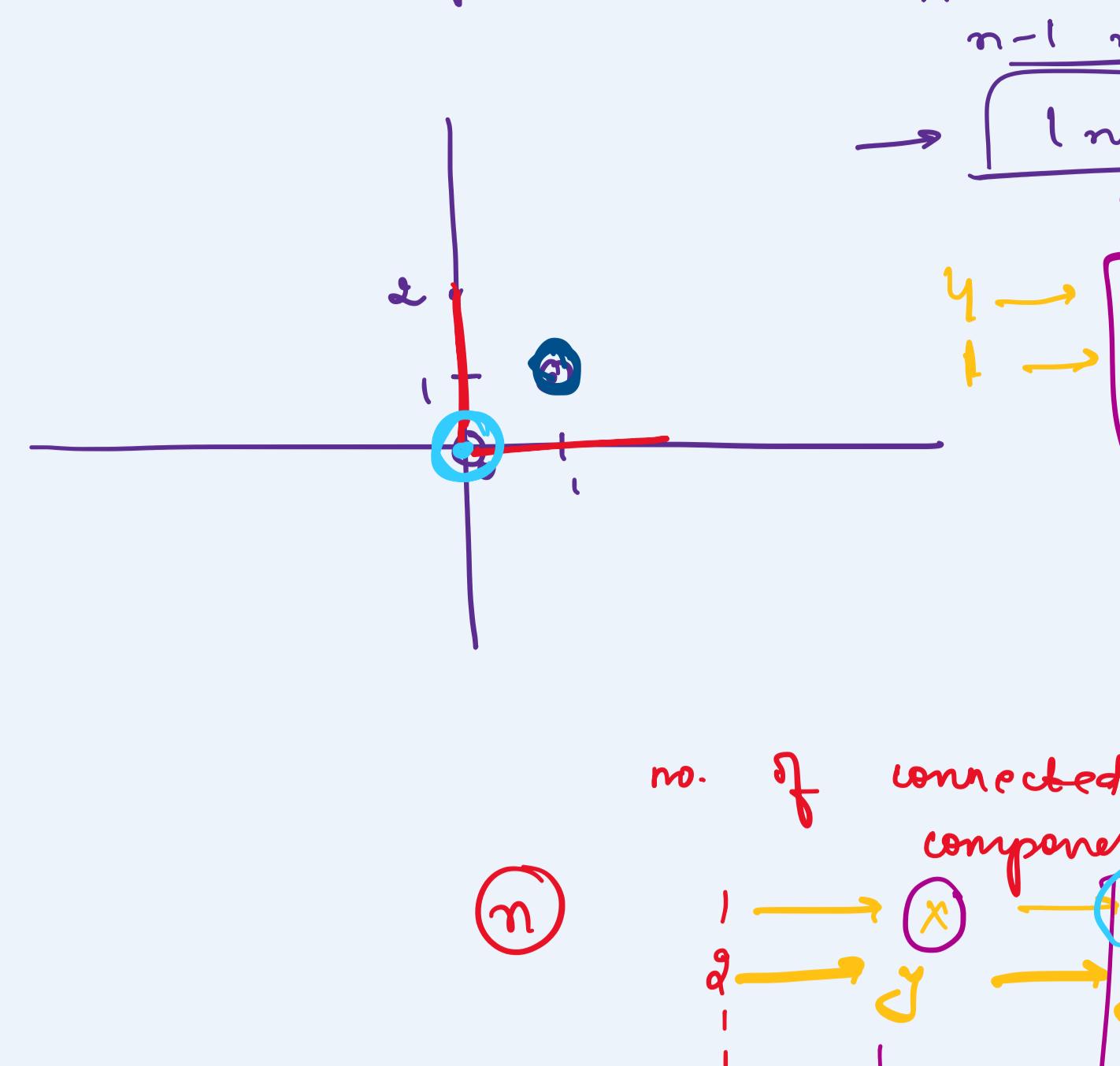
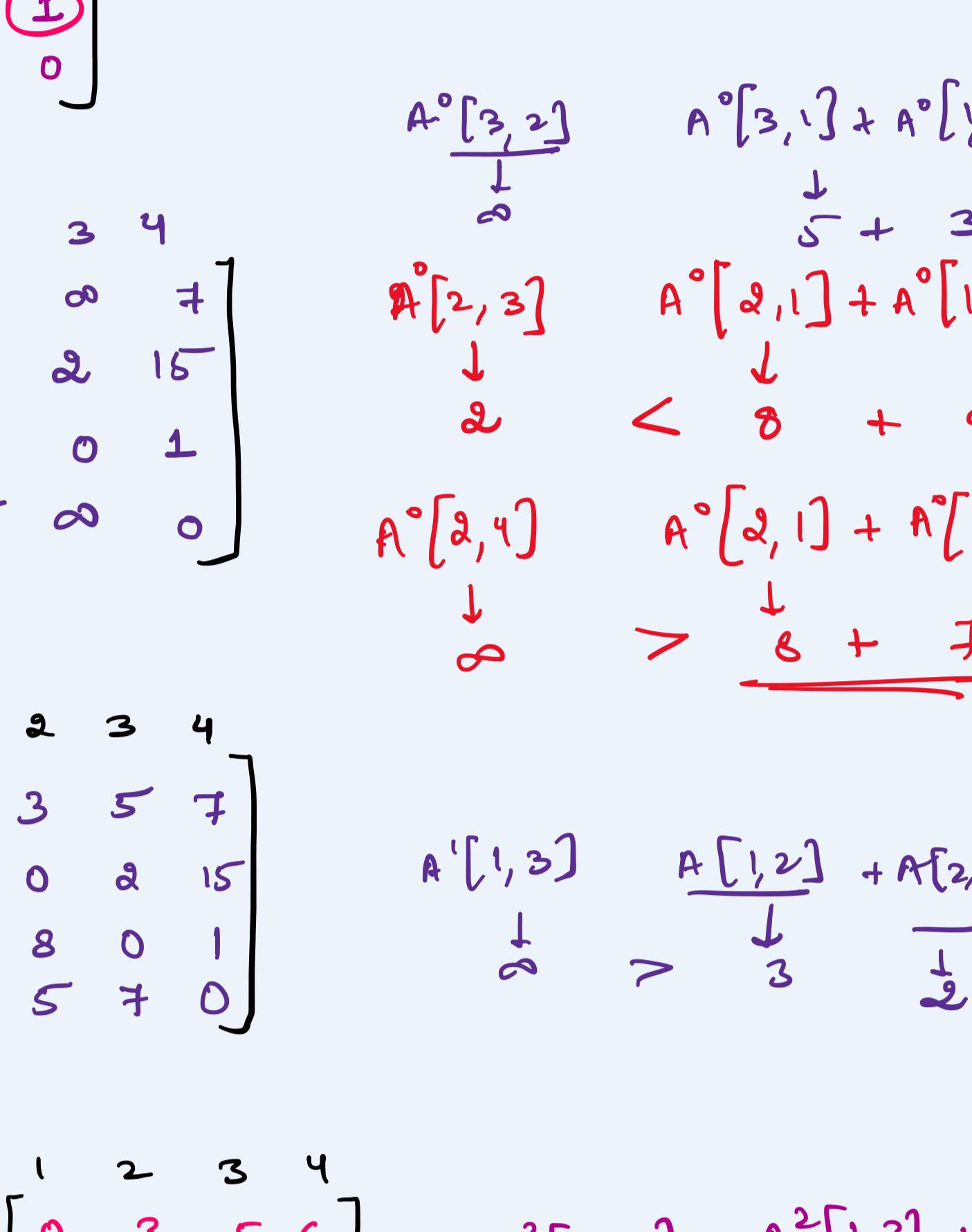
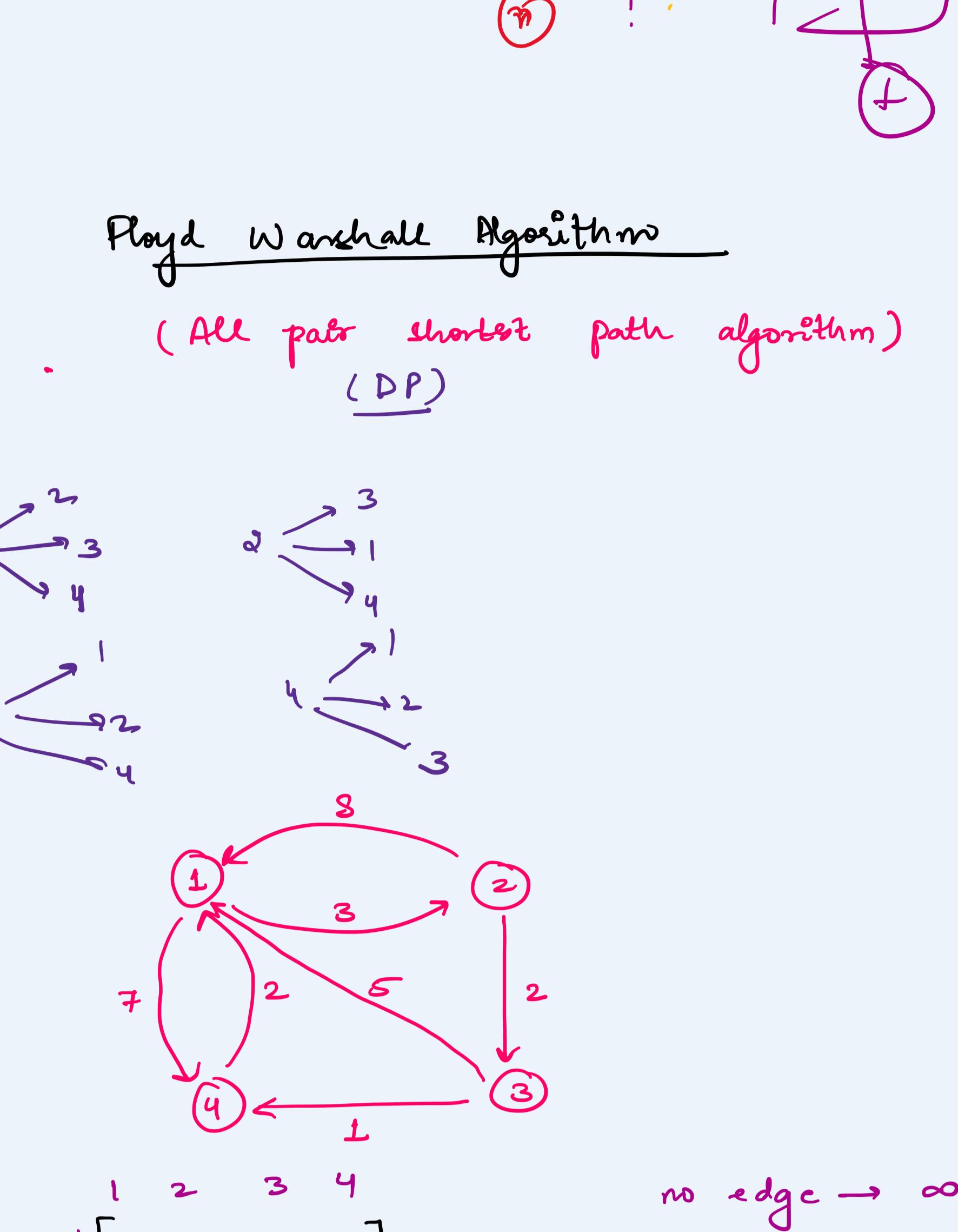


Q Max stones removed

Eg:



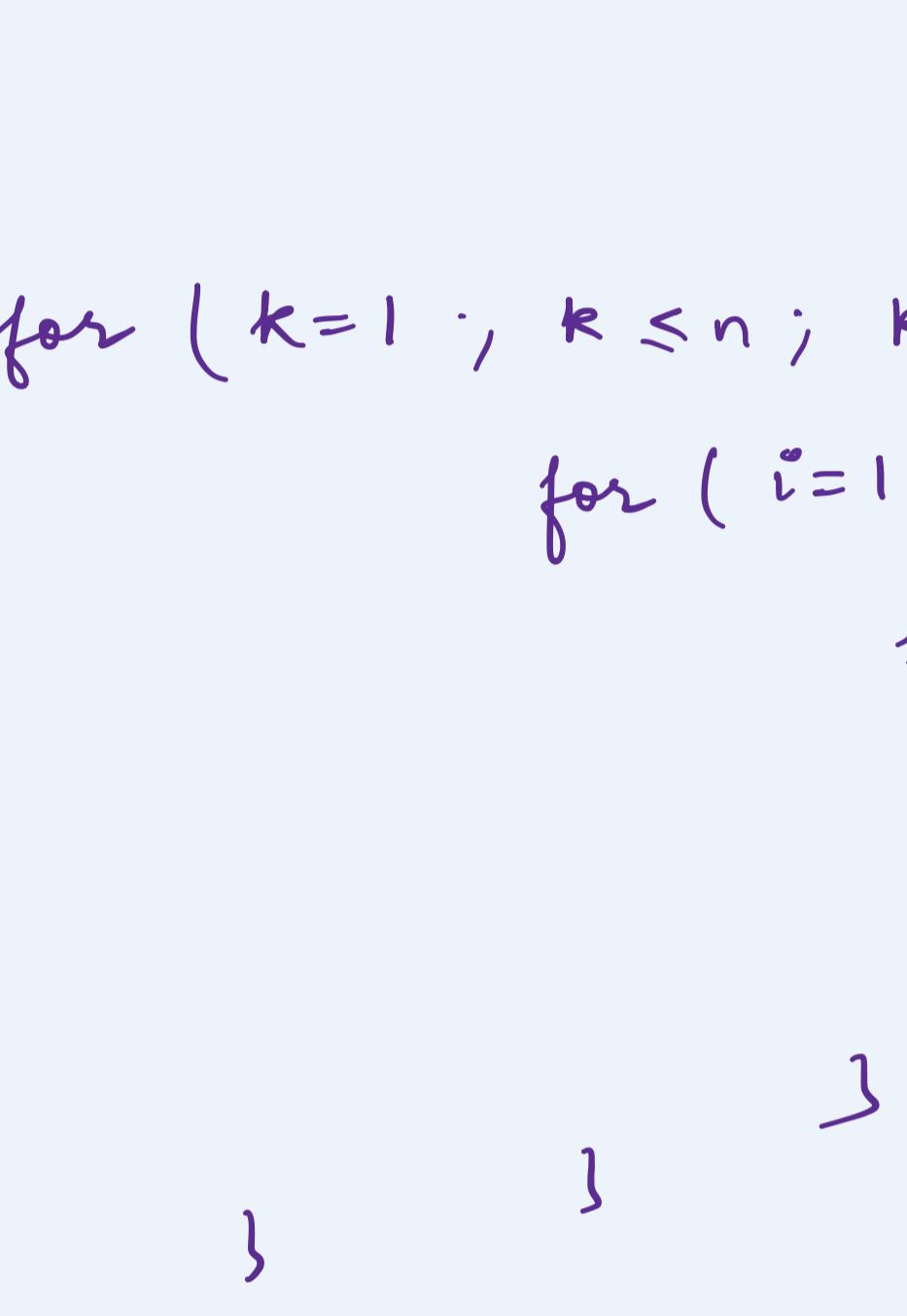
ans → 5



Play Warshall Algorithm

(All pair shortest path algorithm)

(DP)



$$A^0 = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 3 & \infty & 7 \\ 2 & 8 & 0 & \infty \\ 3 & 5 & \infty & 0 \\ 4 & 2 & \infty & 0 \end{bmatrix}$$

no edge → ∞
self self → 0

$$A^1 = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 3 & \infty & 7 \\ 2 & 8 & 0 & 15 \\ 3 & 5 & 8 & 0 \\ 4 & 2 & 5 & 0 \end{bmatrix}$$

$$A^0[3,2] \quad A^0[3,1] + A^0[2,2]$$

$$A^0[2,3] \quad A^0[2,1] + A^0[1,3]$$

$$A^0[2,4] \quad A^0[2,1] + A^0[1,4]$$

$$A^2 = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 3 & 5 & 7 \\ 2 & 8 & 0 & 21 \\ 3 & 5 & 8 & 0 \\ 4 & 2 & 5 & 0 \end{bmatrix}$$

$$A^1[1,3] \quad A^1[1,2] + A^1[2,3]$$

$$A^1[1,4] \quad A^1[1,2] + A^1[2,4]$$

$$A^3 = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 3 & 5 & 6 \\ 2 & 7 & 0 & 23 \\ 3 & 5 & 8 & 0 \\ 4 & 2 & 5 & 0 \end{bmatrix}$$

$$A^2[1,3] \quad A^2[1,2] + A^2[2,3]$$

$$A^2[1,4] \quad A^2[1,2] + A^2[2,4]$$

$$A^4 = \begin{bmatrix} 1 & 2 & 3 & 4 \\ 0 & 3 & 5 & 6 \\ 2 & 5 & 0 & 23 \\ 3 & 5 & 8 & 0 \\ 4 & 2 & 5 & 0 \end{bmatrix}$$

$$A^3[1,3] \quad A^3[1,2] + A^3[2,3]$$

$$A^3[1,4] \quad A^3[1,2] + A^3[2,4]$$

$$A^k[i,j] = \min \{ A^{k-1}[i,j], A^{k-1}[i,k] + A^{k-1}[k,j] \}$$

for ($k=1$; $k \leq n$; $k++$) { for ($i=1$; $i \leq n$; $i++$) { for ($j=1$; $j \leq n$; $j++$) { $A[i,j] = \min [A[i,j], A[i,k] + A[k,j]]$;

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