

reformulate as QUBO

$$\begin{array}{ll} \min_x & c^\top x \\ \text{s.t.} & Ax = b \end{array}$$

$$\min_x x^\top Q x$$

$$\begin{array}{c} \begin{bmatrix} 0 & 0 \\ 0 & q_{ij} \end{bmatrix} \leftarrow \begin{array}{c} \vdots \\ \text{---} \end{array} \\ \vdots \downarrow \\ i, j, \dots, k \rightarrow \end{array} \quad \begin{array}{c} \begin{bmatrix} 0 \\ q_{kk} \end{bmatrix} \leftarrow \text{---} \\ \vdots \downarrow \end{array} \quad \overbrace{\begin{pmatrix} q_{11} & \dots & q_{1j} & \dots & q_{1n} \\ & \ddots & \textcircled{q_{ij}} & \dots & \\ & & \textcircled{q_{kk}} & & \vdots \\ & & & \ddots & \\ & & & & q_{nn} \end{pmatrix}}$$