

Solve For l_{ij} For L

$$l_{11}^2 = 4 \Rightarrow \boxed{l_{11} = 2}$$

$$l_{11} \cdot l_{21} = 1/2 = 2 \cdot l_{21} \Rightarrow \boxed{l_{21} = 1/4}$$

$$l_{11} \cdot l_{31} = 1 = 2 \cdot l_{31} \Rightarrow \boxed{l_{31} = 1/2}$$

$$l_{21}^2 + l_{22}^2 = 17/16, \quad (1/4)^2 + l_{22}^2 = 17/16, \quad l_{22}^2 = 17/16 - 1/16 \Rightarrow \boxed{l_{22} = 1}$$

$$l_{21} l_{31} + l_{22} l_{32} = 1/4 = 1/4 \cdot 1/2 + 1 \cdot l_{32} = 1/4, \quad l_{32} = 1/4 - 1/8 \Rightarrow \boxed{l_{32} = 1/8}$$

$$l_{31}^2 + l_{32}^2 + l_{33}^2 = 33/64 = 33/64 = l_{33}^2 + (1/2)^2 + (1/8)^2, \quad l_{33}^2 = 33/64 - 1/4 - 1/64 = 1/4$$

$$\Rightarrow$$

$$\boxed{l_{33} = 1/2}$$

$$L = \begin{bmatrix} 2 & 0 & 0 \\ 1/4 & 1 & 0 \\ 1/2 & 1/8 & 1/2 \end{bmatrix}$$

Total FLOPS