$$\mathbf{A}^T = egin{bmatrix} a_{11} & a_{21} & a_{31} \ a_{12} & a_{22} & a_{32} \ a_{13} & a_{23} & a_{33} \ a_{14} & a_{24} & a_{34} \ a_{15} & a_{25} & a_{35} \end{bmatrix}$$