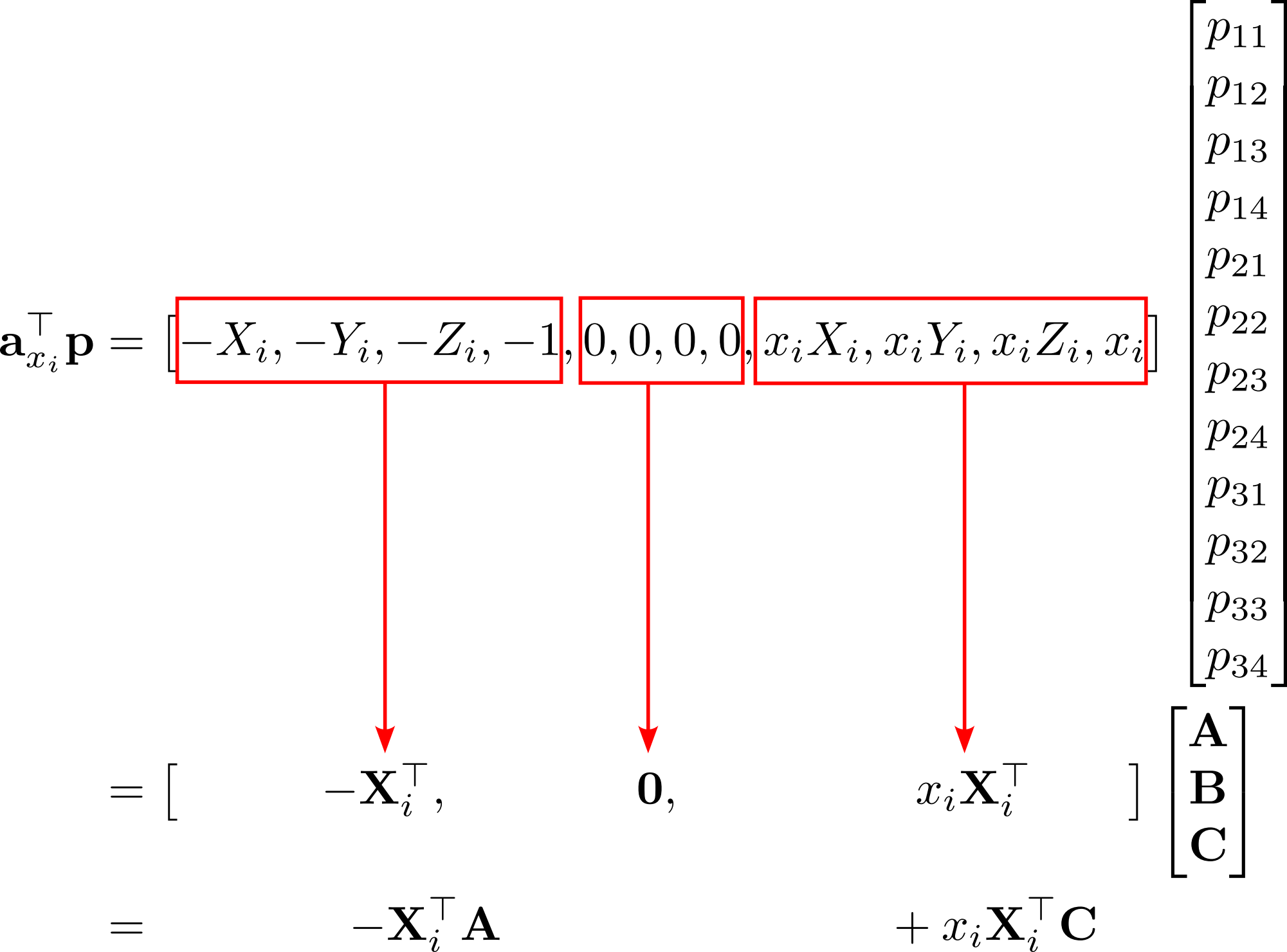
$\mathbf{a}_{x_i}^\top \mathbf{p} = [-X_i, -Y_i, -Z_i, -1, 0, 0, 0, 0, x_i X_i, x_i Y_i, x_i Z_i, x_i]$
p_{11} p_{12} p_{13} p_{14} p_{21} p_{22} p_{23} p_{24} p_{31} p_{32} p_{33} p_{34}
$= [\ -\mathbf{X}_i^\top, \ \mathbf{0}, \ x_i\mathbf{X}_i^\top\ ]$
$\mathbf{A}$ $\mathbf{B}$ $\mathbf{C}$
$= -\mathbf{X}_i^\top \mathbf{A} + x_i \mathbf{X}_i^\top \mathbf{C}$