Scalar

$$\underbrace{\begin{bmatrix} y_j^{(1)} \\ \vdots \\ y_j^{(s)} \end{bmatrix}}_{\mathbb{F}_{q_s}^{s}} = \underbrace{\underset{=j}{A}}_{\mathbb{F}_{q_s}^{s\times h}} \cdot \underbrace{\begin{bmatrix} x_1 \\ \vdots \\ x_h \end{bmatrix}}_{\mathbb{F}_{q_s}^{h}}$$

Vector

$$\underbrace{\begin{bmatrix} \underline{y}_j^{(1)} \\ \vdots \\ \underline{y}_j^{(s)} \end{bmatrix}}_{\mathbb{F}_{q}^{st}} = \underbrace{\underset{=j}{A}}_{\mathbb{F}_{q}^{st\times th}} \cdot \underbrace{\begin{bmatrix} \underline{x}_1 \\ \vdots \\ \underline{x}_h \end{bmatrix}}_{\mathbb{F}_{q}^{th}}$$

Scalar

$$\underset{=j}{A} = \begin{bmatrix} \underline{a}^{(r_1)} \\ \vdots \\ \underline{a}^{(r_{\alpha l})} \\ \underline{b}^{(\epsilon(j-1)+1)} \\ \vdots \\ \underline{b}^{(\epsilon j)} \end{bmatrix}$$

Vector

$$\underset{=j}{A} = \begin{bmatrix} \underset{=}{A}^{(r_1)} \\ \vdots \\ \underset{=}{A}^{(r_{\alpha l})} \\ \underset{=}{B}^{(\epsilon(j-1)+1)} \\ \vdots \\ \underset{=}{B}^{(\epsilon j)} \end{bmatrix}$$