

Hom-04.

<Matrix-Vector Multiplications>

$$u_1 A_{x1} + u_2 A_{x2} + u_3 A_{x3} + \dots + u_n A_{xn} = \boxed{A \cdot \vec{u}}$$

<Matrix-Matrix Multiplications>

$$\boxed{AB} = \begin{pmatrix} A_{1x} \cdot B_{x1} & A_{1x} \cdot B_{x2} & \dots & A_{1x} \cdot B_{xn} \\ A_{2x} \cdot B_{x1} & & & \\ \vdots & & & \\ A_{mx} \cdot B_{x1} & & & A_{mx} \cdot B_{xn} \end{pmatrix}$$