

$$C=AB=f(A,B)$$

$$C=f(A+A',B)=f(A,B)+f(A',B)$$

$$\begin{aligned} c_1 &= t_{111}a_1b_1+t_{112}a_1b_2+t_{121}a_2b_1+t_{122}a_2b_2 \\ c_2 &= t_{211}a_1b_1+t_{212}a_1b_2+t_{221}a_2b_1+t_{222}a_2b_2 \end{aligned}$$

$$C_i=\sum_{jk}T_{ijk}A_jB_k$$

$$C_i=T_{ijk}A_jB_k$$

$$M_{ij}=\sum_{\lambda=1}^ru_i^\lambda v_j^\lambda$$

$$\begin{pmatrix}2&1\\1&0\end{pmatrix}=\begin{pmatrix}1\\0\end{pmatrix}\begin{pmatrix}1&1\end{pmatrix}+\begin{pmatrix}1\\1\end{pmatrix}\begin{pmatrix}1&0\end{pmatrix}$$

$$T_{ijk}=\sum_{\lambda=1}^ru_i^\lambda v_j^\lambda w_k^\lambda$$

$$C_i=\sum_{\lambda=1}^ru_i^\lambda(v_j^\lambda A_j)(w_k^\lambda B_k)$$