

$$\begin{array}{ccccccc}
 & \mathbf{y} & & \mathbf{\Phi} & & \mathbf{\Psi} & & \mathbf{s} \\
 M \left\{ \begin{array}{c} \text{red} \\ \text{green} \\ \text{blue} \end{array} \right. & = & \begin{array}{|c|c|c|} \hline \text{blue} & \text{green} & \text{red} \\ \hline \text{green} & \text{red} & \text{blue} \\ \hline \text{red} & \text{green} & \text{blue} \\ \hline \end{array} & \times & \begin{array}{|c|c|c|c|c|} \hline \text{blue} & \text{red} & \text{blue} & \text{green} & \text{blue} \\ \hline \text{green} & \text{blue} & \text{red} & \text{green} & \text{green} \\ \hline \text{red} & \text{green} & \text{red} & \text{green} & \text{red} \\ \hline \text{green} & \text{blue} & \text{green} & \text{blue} & \text{red} \\ \hline \text{blue} & \text{blue} & \text{green} & \text{blue} & \text{red} \\ \hline \end{array} & \times & \begin{array}{c} \text{red} \\ \text{blue} \\ \text{green} \\ \text{red} \end{array} \\
 & & & & & \underbrace{\hspace{10em}}_{N} & &
 \end{array}$$