

$$\begin{aligned}
 & \omega = 789 \\
 & \begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} \alpha & \beta \\ \gamma & \delta \end{pmatrix} = \begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} \alpha \\ \gamma \end{pmatrix} + \begin{pmatrix} a & b \\ c & d \end{pmatrix} \begin{pmatrix} \beta \\ \delta \end{pmatrix} = \\
 & = \alpha \begin{pmatrix} a \\ c \end{pmatrix} + \gamma \begin{pmatrix} b \\ d \end{pmatrix} + \beta \begin{pmatrix} a \\ c \end{pmatrix} + \delta \begin{pmatrix} b \\ d \end{pmatrix} = \\
 & = \begin{pmatrix} \alpha a + \gamma b & \beta a + \delta b \\ \alpha c + \gamma d & \beta c + \delta d \end{pmatrix}
 \end{aligned}$$

$$\begin{aligned}
 & \omega = 791 \\
 & \begin{pmatrix} 5 & 8 & -4 \\ 6 & 9 & -5 \\ 4 & 7 & -3 \end{pmatrix} \cdot \begin{pmatrix} 3 & 2 & 5 \\ 4 & -1 & 3 \\ 9 & 6 & 5 \end{pmatrix} = \begin{pmatrix} 15+32-36 & 10-8-24 & 25+24-20 \\ 18+36-45 & 12-5-30 & 30+27-25 \\ 12+28-27 & 8-7-18 & 20+21-15 \end{pmatrix} = \\
 & = \begin{pmatrix} 11 & -22 & 29 \\ 9 & -27 & 32 \\ 13 & -17 & 26 \end{pmatrix}
 \end{aligned}$$

$$\begin{aligned}
 & \omega = 797 \\
 & \begin{pmatrix} 0 & 2 & -1 \\ -2 & -1 & 2 \\ 3 & -2 & -1 \end{pmatrix} \cdot \begin{pmatrix} 70 & 34 & -707 \\ 52 & 26 & -68 \\ 107 & 50 & -140 \end{pmatrix} = \begin{pmatrix} 3 & 2 & 4 \\ 10 & 6 & 2 \\ 5 & 0 & -45 \end{pmatrix} \\
 & \begin{pmatrix} 3 & 2 & 4 \\ 10 & 6 & 2 \\ 5 & 0 & -45 \end{pmatrix} \cdot \begin{pmatrix} 27 & -18 & 10 \\ -16 & 37 & -17 \\ 3 & 2 & 1 \end{pmatrix} = \begin{pmatrix} 1 & 16 & 0 \\ 0 & 10 & 0 \\ 0 & -180 & 5 \end{pmatrix}
 \end{aligned}$$