

$$\left(\begin{array}{c|cc} -1 & 2 \\ 0 & 1 \\ -2 & 3 \end{array} \right) \left(\begin{array}{ccc} 1 & -2 & 0 \\ 2 & -1 & 3 \end{array} \right) + \left(\begin{array}{ccc} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{array} \right)$$

$$= \left(\begin{array}{c|cc} -1 & 1 & 2 \\ 0 & 1 & 2 \\ -2 & 1 & 3 \end{array} \right) \times \left(\begin{array}{c|cc} 2 & 2 \\ 1 & 2 \\ 3 & 2 \end{array} \right)$$

$$\left(\begin{array}{c|cc} -1 & -2 & 2 \\ 0 & -2 & 1 \\ -2 & -2 & 3 \end{array} \right) \times \left(\begin{array}{c|cc} -1 & 2 \\ -1 & 1 \\ -1 & 3 \end{array} \right)$$

$$\left(\begin{array}{c|cc} -1 & 0 & 2 \\ 0 & 0 & 1 \\ -2 & 0 & 3 \end{array} \right) \times \left(\begin{array}{c|cc} 2 & 3 \\ 1 & 3 \\ 3 & 3 \end{array} \right)$$

$$+ \left(\begin{array}{ccc} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{array} \right)$$

$$= \left(\begin{array}{c|cc} -1 & 1 \\ 0 & 1 \\ -2 & 1 \end{array} \right) \times \left(\begin{array}{c|cc} -1 & -2 \\ 0 & -2 \\ -2 & -2 \end{array} \right)$$

$$\left(\begin{array}{c|cc} -1 & 0 \\ 0 & 0 \\ -2 & 0 \end{array} \right) \times \left(\begin{array}{c|cc} 2 & 2 \\ 1 & 2 \\ 3 & 2 \end{array} \right)$$

$$\left(\begin{array}{c|cc} 2 & -1 \\ 1 & -1 \\ 3 & -1 \end{array} \right)$$

$$\left(\begin{array}{c|cc} 2 & 3 \\ 1 & 3 \\ 3 & 3 \end{array} \right)$$

$$+ \left(\begin{array}{ccc} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{array} \right)$$

$$= \left(\begin{array}{c} -1 \\ 0 \\ -2 \end{array} \right) \left(\begin{array}{ccc} 1 & -2 & 0 \end{array} \right) + \left(\begin{array}{c} 2 \\ 1 \\ 3 \end{array} \right) \left(\begin{array}{ccc} 2 & -1 & 3 \end{array} \right) + \left(\begin{array}{ccc} 3 & 0 & -4 \\ -2 & 1 & -3 \\ 1 & -1 & -2 \end{array} \right)$$