13.0005

1)
$$AB = \begin{pmatrix} -1 & 9 & -4 & 13 \\ 16 & -8 & -8 & 6 \end{pmatrix}$$

$$AD = \begin{pmatrix} 1 & 3 \\ 13 & -16 \end{pmatrix}$$

$$BC = \begin{pmatrix} 2 & 0 & 3 \\ 0 & -2 & 6 \\ 3 & -3 & -3 \end{pmatrix}$$

$$CB = \begin{pmatrix} 2 & -1 & 1 & 0 \\ 0 & 0 & 0 & 0 \\ 3 & 0 & -3 & 9 \\ 0 & -2 & -2 & -2 \end{pmatrix}$$

2)
$$DA = \begin{pmatrix} -12 & 7 & 2 \\ -1 & -4 & 11 \end{pmatrix}$$