Assignment for Section 3.2: Permutations and cofactors

(1) Compute the determinants of

$$A = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 8 & 9 \end{bmatrix}, \quad B = \begin{bmatrix} 1 & 2 & 3 \\ 4 & 5 & 6 \\ 7 & 0 & 0 \end{bmatrix}.$$

(2) Let C_{ij} the cofactor corresponding to a_{ij}. For

$$A = \begin{bmatrix} 2 & -1 & 0 \\ -1 & 2 & -1 \\ 0 & -1 & 2 \end{bmatrix},$$

find the **cofactor matrix**

$$C = \begin{bmatrix} C_{11} & C_{12} & C_{13} \\ C_{21} & C_{22} & C_{23} \\ C_{31} & C_{32} & C_{33} \end{bmatrix}.$$

Then compute $AC^\top$.

Please submit a hard copy of

- the assignments for **Section 2.5, Section 2.6, Section 2.7, Section 3.1 and Section 3.2**

at the beginning of class on **2nd, December**. Make sure

(1) your **name, student ID and major** are written on the first page, and
(2) the papers are stapled together.