

$$\text{Let } A = \begin{bmatrix} 5 & -2 \\ -4 & -3 \end{bmatrix}.$$

(a) Find the determinant of  $A$ .

$$\det(A) = \boxed{\phantom{000}}$$

(b) Find the matrix of cofactors of  $A$ .

$$C = \begin{bmatrix} \boxed{\phantom{00}} & \boxed{\phantom{00}} \\ \boxed{\phantom{00}} & \boxed{\phantom{00}} \end{bmatrix}$$

(c) Find the adjugate of  $A$ .

$$\text{adj}(A) = \begin{bmatrix} \boxed{\phantom{00}} & \boxed{\phantom{00}} \\ \boxed{\phantom{00}} & \boxed{\phantom{00}} \end{bmatrix}$$

(d) Find the inverse of  $A$ .

$$A^{-1} = \begin{bmatrix} \boxed{\phantom{00}} & \boxed{\phantom{00}} \\ \boxed{\phantom{00}} & \boxed{\phantom{00}} \end{bmatrix}$$

$$\text{Let } A = \begin{bmatrix} 5 & -2 \\ -4 & -3 \end{bmatrix}.$$

(a) Find the determinant of  $A$ .

$$\det(A) = \boxed{-23}$$

(b) Find the matrix of cofactors of  $A$ .

$$C = \begin{bmatrix} \boxed{-3} & \boxed{4} \\ \boxed{2} & \boxed{5} \end{bmatrix}$$

(c) Find the adjugate of  $A$ .

$$\text{adj}(A) = \begin{bmatrix} \boxed{-3} & \boxed{2} \\ \boxed{4} & \boxed{5} \end{bmatrix}$$

(d) Find the inverse of  $A$ .

$$A^{-1} = \begin{bmatrix} \boxed{3/23} & \boxed{-2/23} \\ \boxed{-4/23} & \boxed{-5/23} \end{bmatrix}$$