

Algebra

$$|A| = 1 \times 1 \times 3 = 3$$

$$|B| = 1$$

$$7. |A^{-1}B^* - A^*B^{-1}|$$

$$= |A^{-1}|B|B^{-1} - |A|A^{-1}B^{-1}|$$

$$= |2A^{-1}B^{-1}|$$

$$= 2^3 |A^{-1}| |B^{-1}|$$

$$= 8 |A|^{-1} |B|^{-1}$$

$$= 8 \times \frac{1}{3} \times 1$$

$$= \frac{8}{3}$$

$$8. \quad AB = C$$

$$C^{-1}AB = E$$

$\therefore C$ 为交换型初等矩阵

$$\therefore C^{-1} = C$$

$$\therefore C$$