

**Instructions:** Show all work. Use exact answers unless specifically asked to round. Answer all parts of each question.

1. Multiply the matrices  $A = \begin{bmatrix} 1 & -2 & 1 \\ 0 & 5 & 3 \end{bmatrix}$ ,  $B = \begin{bmatrix} -3 & 4 \\ 5 & -7 \\ 2 & -2 \end{bmatrix}$  by hand.

2. Find the inverse of  $C = \begin{bmatrix} 4 & 5 \\ 2 & 3 \end{bmatrix}$  by hand.