Quiz 8A (Answers)

1. Let \( A = \begin{bmatrix} 2 & 1 \\ 4 & 0 \\ 1 & 3 \end{bmatrix} \) and \( B = \begin{bmatrix} -1 & 2 \\ 0 & 3 \end{bmatrix} \). In problems (a) to (d), perform the indicated calculation. Show your work as necessary.

(a) \( AB \)

(b) \( A^T \)

(c) \( B^2 \)

(d) \( B^{-1} \) (Use row reduction.)

Answer. \( AB = \begin{bmatrix} -2 & 7 \\ -4 & 8 \\ -1 & 11 \end{bmatrix} \).

\( A^T = \begin{bmatrix} 2 & 4 & 1 \\ 1 & 0 & 3 \end{bmatrix} \).

\( B^2 = \begin{bmatrix} 1 & 4 \\ 0 & 9 \end{bmatrix} \).

\( B^{-1} = \begin{bmatrix} -1 & 2/3 \\ 0 & 1/3 \end{bmatrix} \).