0.4 Matrix Multiplication to Transform a Vector

1. Find the Following

(a) $\begin{bmatrix} 0 & 1 \\ 5 & 2 \end{bmatrix} \begin{bmatrix} 3 & 2 & 2 \\ 1 & 0 & 4 \end{bmatrix}$ (b) $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix} \begin{bmatrix} 2 \\ 4 \end{bmatrix}$ (c) $\begin{bmatrix} 1 & 1 & 2 \end{bmatrix} \begin{bmatrix} 0 \\ 3 \\ 8 \end{bmatrix}$

2. For a matrix A and it's inverse A^{-1}, what is $A^{-1}A$?

3. For a matrix A and the identity matrix I, what is IA?

Answers

1.

(a) $\begin{bmatrix} 1 & 0 & 4 \\ 17 & 10 & 18 \end{bmatrix}$ (b) $\begin{bmatrix} 2 \\ 4 \end{bmatrix}$ (c) $\begin{bmatrix} 19 \end{bmatrix}$

2. $A^{-1}A = I$, where I is the identity matrix

3. $IA = A$