Practice Problems.

(1) Assume that A, B and C are matrices. If $ABCA + C = A$ and B has 3 columns, then how many rows does C have?

(2) Correct the following statements.

(a) If $A = \begin{bmatrix} \mathbf{a}_1 & \mathbf{a}_2 \end{bmatrix}$ and $B = \begin{bmatrix} \mathbf{b}_1 & \mathbf{b}_2 \end{bmatrix}$, then $AB = \begin{bmatrix} \mathbf{a}_1\mathbf{b}_1 & \mathbf{a}_2\mathbf{b}_2 \end{bmatrix}$.

(b) The equation $A\mathbf{x} = \mathbf{0}$ is sometimes inconsistent.