Problems

1. Let $A = \begin{bmatrix} 1 & 2 \\ 0 & 4 \end{bmatrix} B = \begin{bmatrix} 2 & 1 \\ 3 & 1 \end{bmatrix}$ and $C = \begin{bmatrix} 3 \\ 5 \end{bmatrix}$ Then if possible do these following operations a) A + B

b) 3A - 2C

c) AC

d) CA

Perform the following matrix operation if possible.

$$2. \begin{bmatrix} 2 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 4 \end{bmatrix} \begin{bmatrix} 1 & 0 & 0 \\ 0 & 2 & 0 \\ 0 & 0 & 1 \end{bmatrix} =$$

$$3. \begin{bmatrix} 2 & 4 \\ 0 & -1 \end{bmatrix} \begin{bmatrix} 2 & 0 \\ 1 & -1 \end{bmatrix} =$$

$$4. \begin{bmatrix} 2 & 4 \\ 0 & -1 \end{bmatrix} + \begin{bmatrix} 1 & 0 & 0 \\ 3 & 1 & 0 \end{bmatrix} =$$