Given matrices A and B below. Perform the indicated operations.

$$A = \begin{bmatrix} 1 & -1 \\ 4 & 3 \end{bmatrix} \qquad B = \begin{bmatrix} 2 & -3 \\ -1 & 1 \end{bmatrix}$$

1.   A + B =

2.   A – B =

3.   -2A =

4.   4B =

5.   2A + 3B =

6.   5A – 2B =

7.   AB =

8.   BA =

Given matrices C and D below. Find the indicated products.

$$C = \begin{bmatrix} 4 & -1 & -2 \\ -3 & 2 & 5 \end{bmatrix} \qquad D = \begin{bmatrix} -5 & 2 \\ 7 & 6 \\ 3 & 8 \end{bmatrix}$$

9.   CD =

10.   DC =

Given matrix A, find A^{-1}. Show your work neatly organized.

11. $A = \begin{bmatrix} 2 & 7 \\ 1 & 3 \end{bmatrix}$

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