

To store matrices in your calculator:

1. Press 2<sup>nd</sup>, X<sup>-1</sup>
2. Arrow over twice to "EDIT" and choose a place to store your matrix.
3. Enter the size of the matrix you are storing.
4. Type in an entry and then hit ENTER.

Store the following matrices in your calculator:

$$A = \begin{bmatrix} 4 & 9 \\ -2 & 1 \\ 5 & 0 \end{bmatrix} \quad B = \begin{bmatrix} 4 & 3 \\ -2 & -7 \end{bmatrix} \quad C = \begin{bmatrix} 8 & -1 \\ 7 & 3 \\ 11 & -2 \end{bmatrix}$$

$$D = \begin{bmatrix} 1 & 0 \\ 5 & -2 \end{bmatrix} \quad E = \begin{bmatrix} 5 & -8 & 11 \\ 0 & -3 & 7 \end{bmatrix}$$

Perform the indicated operation:

1)  $A + C$

2)  $B - D$

3)  $\frac{1}{2} D$

4)  $AD$

5)  $EA$

6)  $3E(A - C)$

- A square matrix is a matrix that has the same # of rows as columns.
- The identity matrix of a  $2 \times 2$  is:  $\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$ 
  - The identity is the same as multiplying by 1!
- The determinant of a matrix is a number associated with that matrix (ex:  $\det A$ ).
- Two matrices are inverses of each other if, when multiplied together, the answer is the *identity matrix* (ex:  $A^{-1}$ ).

Perform the indicated operation:

7)  $\det B$

8)  $\det E$

9)  $D^{-1}$

10)  $A^{-1}$