Bell Work:

$$A = \begin{bmatrix} 4 & 0 \\ -2 & 3 \end{bmatrix} \qquad B = \begin{bmatrix} -1 & 2 \\ 5 & -6 \end{bmatrix}$$

1. $AB =$

2. $A - B =$

3. $A + B =$

4. $4A - 3B =$

First, you need to have a graphing calculator.

If you don't have one, you can download software onto your computer and/or phone.

Software: Wabbitemu

http://wabbit.codeplex.com/

Youtube tutorial for downloading and installing the software:

https://www.youtube.com/watch?v=ZX6JoWShL8c

You can also download wabbitemu for android phones.

However, wabbitemu is not available for iphones.

Type the matrices into the calculator.

2ⁿᵈ Matrix

Type the matrices into the calculator.

2nd **Matrix**

Hit the right arrow key to move the highlight to EDIT

Type the matrices into the calculator.

2nd Matrix

Hit the right arrow key to move the highlight to EDIT

A is already highlighted, so type ENTER.

Type the matrices into the calculator.

2ⁿᵈ Matrix

Hit the right arrow key to move the highlight to EDIT

A is already highlighted, so type ENTER.

A is 2 × 2 matrix, so type in the dimensions. Then type in the numbers.

$$A = \begin{bmatrix} 3 & -5 \\ 2 & 4 \end{bmatrix}$$

Type the matrices into the calculator.

2nd Matrix

Hit the right arrow key to move the highlight to EDIT

A is already highlighted, so type ENTER.

A is 2 × 2 matrix, so type in the dimensions. Then type in the numbers.

After typing in the numbers, type 2nd QUIT.

$$A = \begin{bmatrix} 3 & -5 \\ 2 & 4 \end{bmatrix}$$

Type the matrices into the calculator.

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   2nd **Matrix**

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Type the matrices into the calculator.

   2nd Matrix

   Hit the right arrow key to move the highlight to EDIT

   For B, you can hit 2 or move down 1 and hit ENTER.

Type the matrices into the calculator.

2nd Matrix

Hit the right arrow key to move the highlight to EDIT

For B, you can hit 2 or move down 1 and hit ENTER.

B is 2 $\times$ 3 matrix, so type in the dimensions. Then type in the numbers.

$$B = \begin{bmatrix} -2 & 5 & -4 \\ 0 & 6 & 3 \end{bmatrix}$$

Type the matrices into the calculator.

2nd Matrix

Hit the right arrow key to move the highlight to EDIT

For B, you can hit 2 or move down 1 and hit ENTER.

B is 2 × 3 matrix, so type in the dimensions. Then type in the numbers.

After typing in the numbers, type 2nd QUIT.

$$B = \begin{bmatrix} -2 & 5 & -4 \\ 0 & 6 & 3 \end{bmatrix}$$

Type the matrices into the calculator.

Do the same for C, D, and E.

$$C = \begin{bmatrix} 7 & -3 & 0 \\ 4 & 2 & -5 \end{bmatrix} \qquad D = \begin{bmatrix} 3 & 5 & -2 \\ -4 & -9 & 6 \\ 7 & 4 & 0 \end{bmatrix}$$

$$E = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$$
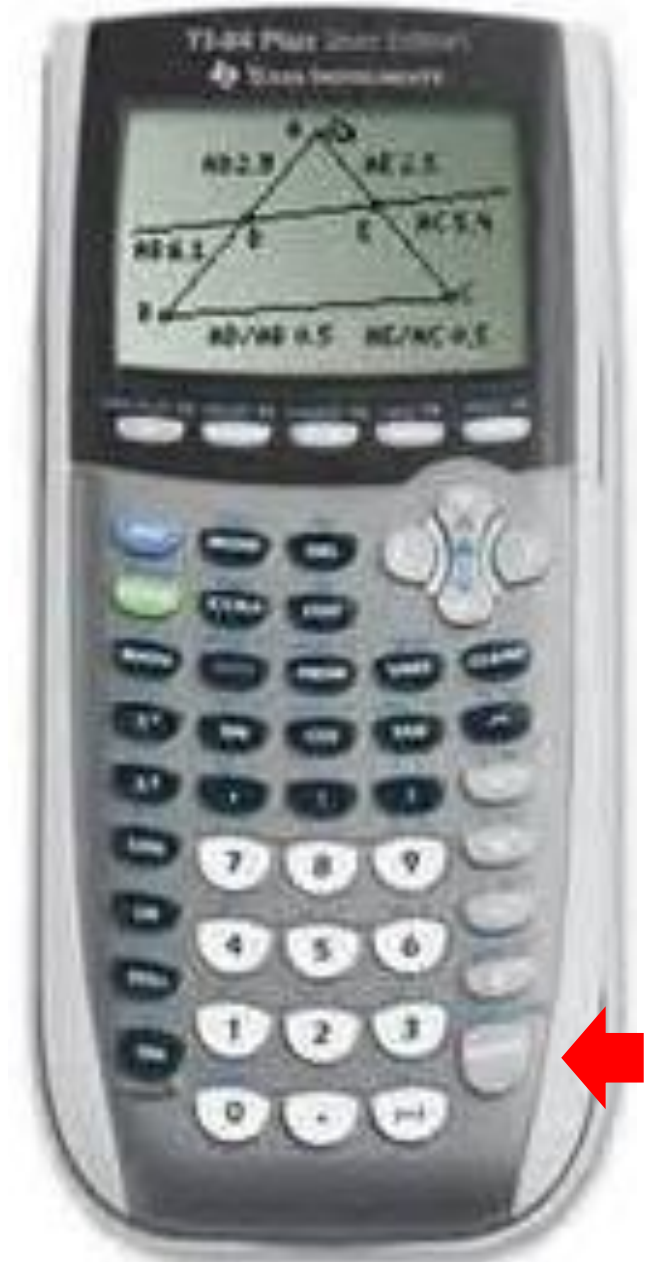
Multiplying matrices.

2nd Matrix

Multiplying matrices.

    2ⁿᵈ Matrix

    (Don't go to EDIT.)

    A is highlighted. Hit 1 or ENTER.

Multiplying matrices.

   2nd Matrix

   (Don't go to EDIT.)

   A is highlighted. Hit 1 or ENTER.

   2nd Matrix

   Go down to B and hit ENTER or hit 2 to get matrix B.

Multiplying matrices.

2nd **Matrix**

(Don't go to EDIT.)

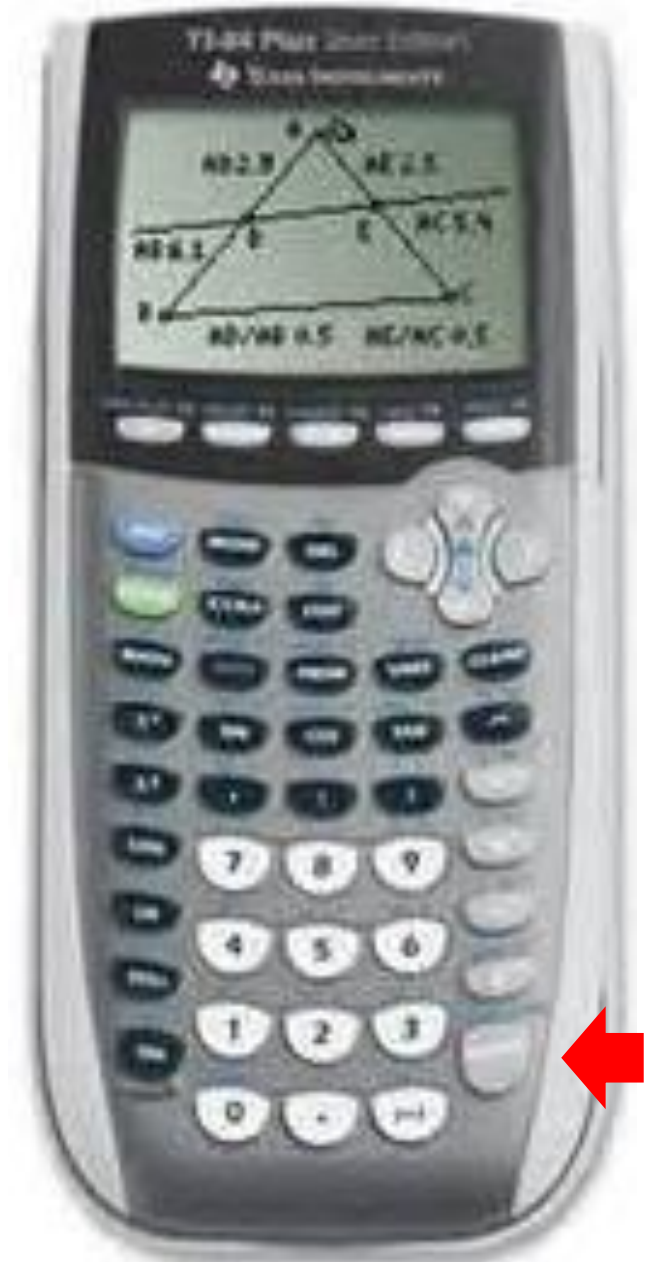**A is highlighted. Hit 1 or ENTER.**

2nd **Matrix**

Go down to B and hit ENTER or hit 2 to get matrix B.

The Calculator should show [A][B]. Hit ENTER for the answer.

Multiplying matrices.

$$[A][B] = \begin{bmatrix} -6 & -15 & -27 \\ -4 & 34 & 4 \end{bmatrix}$$

Multiplying matrices.

For A^2, you can multiply A by itself (AA) or you can use the square button.

$$A^2 = \begin{bmatrix} -1 & -35 \\ 14 & 6 \end{bmatrix}$$

Multiplying matrices.

With parenthesis, use the times symbol when a matrix is in front of the parenthesis.

It doesn't need a times symbol when matrix is after the parenthesis.

[A]*([B]+[C]) works.

[A]([B]+[C]) doesn't works

([B]+[C])[D] and ([B]+[C])*[D] works.

Multiplying matrices.

Use double parenthesis for brackets.

[(AB)D]E ➔ ((([A][B])[D])[E]

$$((([A][B])[D])[E] = \begin{bmatrix} -147 & -3 & -78 \\ -120 & -310 & 212 \end{bmatrix}$$

If the matrix is too long, use the arrow keys to move left and right.

Multiplying matrices.

With numbers, you can use a times symbol or not.

[A]*(3[B]) or [A]*(3*[B])

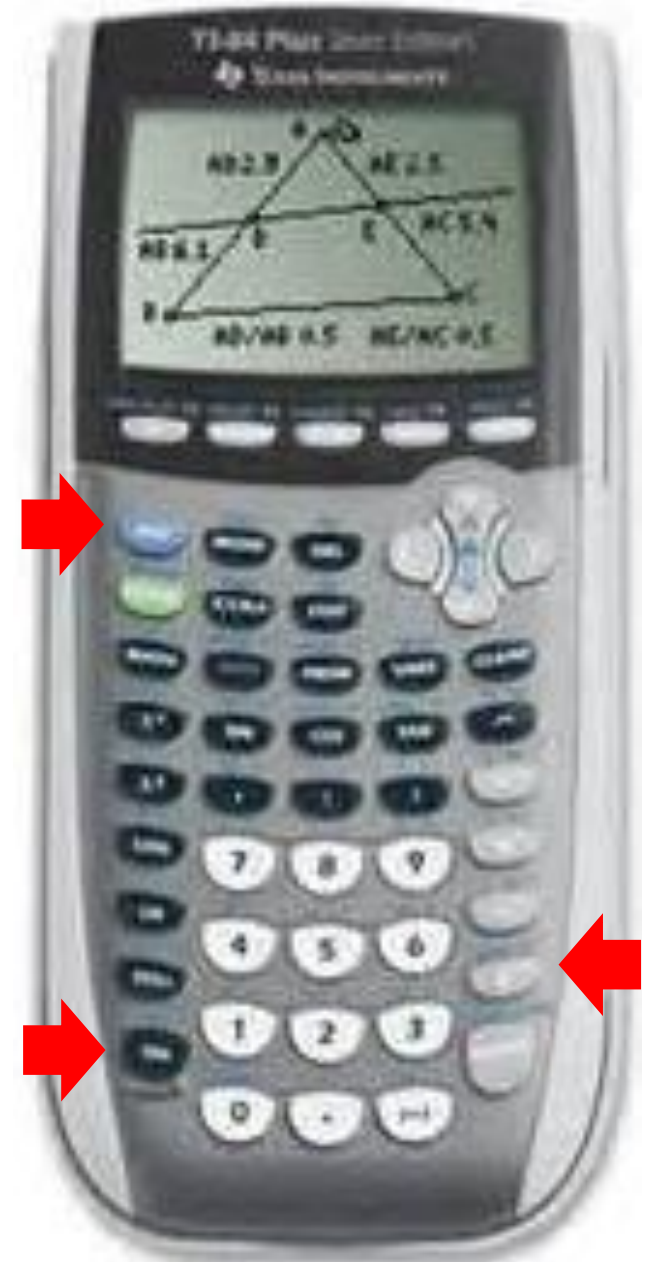$$[A]*(3[B]) = \begin{bmatrix} -18 & -45 & -81 \\ -12 & 102 & 12 \end{bmatrix}$$

Clearing the memory.

2nd +

7, 1, 2

Turning it off.

2nd On

Assignment:

Multiplying Matrices Worksheet