**Arithmetic with Matrices**

Follow the directions below and then answer the question using your graphing calculator.

(1) Turn on your graphing calculator and press **2nd MATRIX**.

(2) Go to **EDIT** and press enter at **1: [A].**

(3) Type **2** x **3**. This is the dimension of your first matrix.

(4) Enter the following matrix:

(5) Press **2nd QUIT**.

(6) Press **2nd MATRIX**.

(7) Go to **EDIT** and press enter at **2: [B].**

(8) Type **2** x **3**. This is the dimension of your second matrix.

(9) Enter the following matrix:

(10) Press **2nd QUIT**.

(11) Press **2nd MATRIX** and press enter on **1: [A]** then **+** press **2nd MATRIX** and press enter on **2: [B]** and press enter. You just added Matrix A and B.

Do the following problem and write your solution as a group on one whiteboard. Call me over when you are done.

What is ?

What is ?

**Determinants of Matrices**

Follow the directions below and then answer the question using your graphing calculator.

(1) Press **2nd MATRIX**.

(2) Go to **MATH** and press enter on **1: det (**

(3) Press **2nd MATRIX** and press enter on **1: [A]** and close the parenthesis **)**.

(4) Press enter. You just found the determinant of A.

Do the following problem and write your solution as a group on one whiteboard. Call me over when you are done.

What is ?

**Solving a System of Matrices using Row Reductions**

Follow the directions below and then answer the question using your graphing calculator.

(1) Press **2nd MATRIX**.

(2) Go to **MATH** and press enter on **B: rref (**

(3) Press **2nd MATRIX** and press enter on **1: [A]** and close the parenthesis **)**.

(4) Press enter. You just found the solution to the system of A.

Do the following problem and write your solution as a group on one whiteboard. Call me over when you are done.

What is and what is ?