Algebra 2
Unit: Systems of Equations and Inequalities
Section: Matrices and Determinants

Example: Basic Operations with Matrices

Screen 1
Use matrices A and B to solve the following problems.
Number 1: Find A plus B.
Number 2: Find A minus B.
Number 3: Find 2 A.

Matrix A is a 3 by 2 matrix, row one is 1, 0, row two is negative 3, 10, row three is 6, negative 2.
Matrix B is also a 3 by 2 matrix, row one is 1, 3, row two is 2, 2, and row three is 4, negative 5.

A plus B is a 3 by 2 matrix. The term in the first row and first column is 1 plus 1. The term in the first row and second column is 0 plus 3. The term in the second row and first column is negative 3 plus 2. The term in the second row and second column is 10 plus 2. The term in the third row and first column is 6 plus 4. The term in the third row and second column is negative 2 plus negative 5.   The final answer is a 3 by 2 matrix. Row one is 2, 3. Row two is negative 1, 12. And row three is 10, negative 7.

A minus B is a 3 by 2 matrix. The term in the first row and first column is 1 minus 1. The term in the first row and second column is 0 minus 3. The term in the second row and first column is negative 3 minus 2. The term in the second row and second column is 10 minus 2. The term in the third row and first column is 6 minus 4. The term in the third row and second column is negative 2 minus negative 5.   The final answer is a 3 by 2 matrix. Row one is 0, negative 3. Row two is negative 5, 8. And row three is 2, 3.

Two A is a 3 by 2 matrix. The whole matrix is multiplied by 2. The term in the first row and first column is 2 times 1. The term in the first row and second column is 2 times 0. The term in the second row and first column is 2 times negative 3. The term in the second row and second column is 2 times 10. The term in the third row and first column is 2 times 6. The term in the third row and second column is 2 times negative 2.   The final answer is a 3 by 2 matrix. Row one is 2, 0. Row two is negative 6, 20. And row three is 12, negative 4.