

College Algebra
Math1043 Exam VI-warmup

Section 6.1: Be able to do matrix addition and subtraction, multiplication of a matrix by a number, and matrix product not only by a calculator but also without a calculator.. Here are some examples:

Let

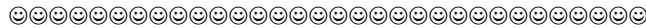
$$A = \begin{bmatrix} 0 & 3 \\ 1 & -2 \end{bmatrix} \quad B = \begin{bmatrix} 2 & 1 & -3 \\ -1 & 0 & 2 \end{bmatrix} \quad C = \begin{bmatrix} 2 & -1 \\ 0 & 1 \\ 3 & -2 \end{bmatrix} \quad D = \begin{bmatrix} -1 & 1 \\ -4 & -3 \end{bmatrix}$$

1. Find: $A + B$, $2A - D$, AC , CA .

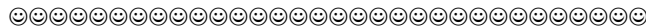
$$A = \begin{bmatrix} -2 & -1 & 4 \\ 1 & 3 & -3 \\ 2 & 1 & 5 \end{bmatrix} \quad B = \begin{bmatrix} 1 & 4 & 2 & 1 \\ 3 & 1 & -2 & 9 \\ -3 & 4 & -5 & -3 \end{bmatrix}$$

2. Find the dimension of BC . **Also be able to do problems similar to the assigned problems from this section.**

3. If A and B are given below, then find the element on the 2nd row and 4th column of the product AB . Also the element on the 1st row and 3rd column.



Section 6.3: Be able to convert a system of linear equations into a matrix equation and conversely, put a matrix equation into a system of linear equations (problems #1-8 on page 503). Be able to solve a system of linear equation by using the inverse matrix (see examples 2 and 3 of this section and also the assigned problems of this section).



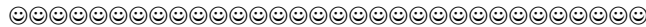
Section 6.4: Be able to find the determinant of 2×2 and 3×3 matrices. Also be able to find the cofactor of any entry of a matrix

Look at problem # 1 through 30 of the exercise set for this section.



Section 6.6: Be able to use Cramer's Rule to solve systems of linear equations

Look at: # 13, 15, 17,



Section 7.6: Be familiar with Pascal's Triangle. Be familiar with the notion of FACTORIAL. Be able to use the Binomial Theorem to find any term in the expansion of $(a+b)^n$. **Look at all examples in this section and the assigned problems**

