

ALGEBRA II
Chapter 3 section 5
Perform Basic Matrix Operations
pg. 187

FOCUS:

How do you perform the basic matrix operations?

VOCAB:

Matrix: _____

Dimensions: _____

Elements: _____

Equal Matrices: _____

Scalar: _____

Scalar Multiplication: _____

WARM – UP:

Identify the property of real numbers illustrated.

1. $(6 + 4) + (-2) = 6 + [4 + (-2)]$ _____ 2. $3(5x + 1) = 3 \cdot 5x + 3 \cdot 1$ _____

3. Solve $3x + 9 = 24$ _____

NOTES:

Perform the indicated operation, if possible.

$$\begin{bmatrix} 2 & 4 \\ 0 & 1 \end{bmatrix} + \begin{bmatrix} -3 & 2 \\ 4 & 0 \end{bmatrix} =$$

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

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

$$-3 \begin{bmatrix} -1 & 5 \\ 4 & 0 \end{bmatrix} + \begin{bmatrix} -2 & 1 \\ 5 & -3 \end{bmatrix} =$$

A local bakery keeps track of their sales as shown below.

Last month: Store 1: 650 Rolls, 220 Cakes, 32 Pies
Store 2: 540 Rolls, 200 Cakes, 30 Pies

This month: Store 1: 840 Rolls, 250 Cakes, 50 Pies
Store 2: 800 Rolls, 250 Cakes, 42 Pies

Organize the data using matrices.

Write and interpret a matrix giving the number of total bakery items sold per store.

Solve the matrix equation for x and y.

$$2 \left(\begin{bmatrix} 2x & -3 \\ 5 & -y \end{bmatrix} + \begin{bmatrix} -1 & 4 \\ 3 & 5 \end{bmatrix} \right) = \begin{bmatrix} 10 & 2 \\ 16 & 14 \end{bmatrix}$$

Let's see if you comprehended what we worked on in class...

Try _____ for homework