

Assignment: Operations with Matrices

Follow the directions to solve each problem using various operations with matrices.

1. Adding Matrices

The tables below compare the performances of three college softball players over two seasons.

Season 1:

	Home Runs	Runs Batted In
S. James	18	37
C. Lenore	11	43
E. Myers	14	48

Season 2:

	Home Runs	Runs Batted In
S. James	17	41
C. Lenore	15	52
E. Myers	19	39

a. Create two 3×2 matrices based on the data and then add the matrices.

b. Write 1-2 sentences to explain what the values in the resulting matrix represent.

2. Subtracting Matrices

The tables below compare enrollment of boys and girls in a community theater program during each season throughout a year.

	Fall	Winter	Spring	Summer
Number of Girls Enrolled	23	20	25	32
Number of Boys Enrolled	20	18	24	30

a. Create two 1×4 matrices based on the data and then subtract the matrices.

b. Write 1-2 sentences to explain what the values in the resulting matrix represent.

3. Multiplying by a Scalar

The table below shows the average prices of some items available for sale in different departments at a retail store.

	Women's	Men's	Children's
T-shirt	\$12	\$10	\$8
Jeans	\$24	\$24	\$18
Sweater	\$28	\$30	\$22

a. Create a 3×3 matrix based on the data and then multiply the matrix by 0.75.



b. Write 1-2 sentences to explain what the values in the resulting matrix represent.



4. Create your own Matrix Problem

Write a problem similar to the problems above that involves an operation with matrices. The problem should include the following parts:

a. a table that shows quantities of various real-world items,



b. an operation with matrices (either addition, subtraction, or scalar multiplication) based on the values in the table,



c. One to two sentences that explain the meaning of the resulting matrix.

