

Transition to College Math

Homework

Unit 2 Lesson 1

Matrices

Name _____ Date _____ Period _____

Find the matrix **A** in each of the following equations that makes the equation true.

1. $\mathbf{A} + \begin{bmatrix} 3 & -2 \\ 4 & 0 \end{bmatrix} = \begin{bmatrix} -2 & -5 \\ 3 & -8 \end{bmatrix}$

2. $3\mathbf{A} - \begin{bmatrix} 8 & 2 \\ -12 & 5 \end{bmatrix} = \begin{bmatrix} -2 & -5 \\ 3 & -8 \end{bmatrix}$

3. Suppose a certain manufacturer produces four types of cars, listed in the table below. Also listed are their average fuel economies, in miles per gallon (mpg). Represent these data in a matrix.

| Vehicle Type | City Driving | Highway Driving |
|--------------|--------------|-----------------|
| Economy | 32 mpg | 40 mpg |
| Mid-size | 24 mpg | 34 mpg |
| Mini-van | 18 mpg | 25 mpg |
| SUV | 19 mpg | 22 mpg |

4. Suppose the fuel economy for the next year's model increases by 6%. Write a new matrix that reflects this.