

Name _____

4-3A Lesson Master**Questions on SPUR Objectives**

See Student Edition pages 293–297 for objectives.

SKILLS Objective C

In 1–4, perform the indicated operations.

1. $[2 \ 1 \ 5] \cdot \begin{bmatrix} 6 \\ 3 \\ -2 \end{bmatrix} =$ _____

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

3. $\begin{bmatrix} 6 & 3 \\ 1 & 0 \end{bmatrix} \cdot \begin{bmatrix} x \\ y \end{bmatrix} =$ _____

4. $\begin{bmatrix} 3 & 1 & 0 \\ -2 & 5 & 1 \\ 0 & 3 & -1 \end{bmatrix} \cdot \begin{bmatrix} 2 & 7 \\ 4 & 0 \\ 3 & 2 \end{bmatrix} =$ _____

5. Find a and b . $\begin{bmatrix} 2 & -3 \\ 1 & 0 \end{bmatrix} \cdot \begin{bmatrix} a \\ b \end{bmatrix} = \begin{bmatrix} 5 \\ 4 \end{bmatrix}$ _____

PROPERTIES Objective E6. Suppose A is a 9×5 matrix and C is a 5×8 matrix.
Give the dimensions of the product, if it exists.a. AC _____b. CA _____7. A 3×5 matrix M is multiplied by a matrix N . The result is a 3×7 matrix. What are the dimensions of N ? _____8. Is matrix multiplication *associative*, *commutative*, *both*, or *neither*? _____**USES** Objective J

9. Al's Bike Store has three locations. In one month, the store in Valley Heights sold 119 bicycles, 24 tricycles, and 6 unicycles. The one in Mountain Canyon sold 73 bicycles, 9 tricycles, and 7 unicycles; and the one in Lower Hills sold 65 bicycles, 39 tricycles, and 2 unicycles. Each bicycle cost \$239, each tricycle cost \$35, and each unicycle cost \$179.

a. Set up a "store \times type" matrix.b. Set up a "type \times price" matrix.

c. Multiply your matrices to calculate the total sales at each of the three stores.
Write the matrix in the space at the right.