

Name _____

10-7A Lesson Master

Questions on SPUR Objectives
See pages 650–653 for objectives.

SKILLS Objective C

1. Consider the system $\begin{cases} 3x + 7y = -13 \\ 2x - 6y = 34 \end{cases}$.

- a. Write the coefficient matrix. _____
- b. Write the variable matrix. _____
- c. Write the constant matrix. _____

2. Monika and Yoly went shopping at a bookstore. The matrices below represent how many of each type of book the two friends purchased and the cost of each type of book.

| | Paperback | Hardback | | Cost |
|--------|-----------|----------|-------|---|
| Monika | 3 | 1 | $= A$ | Paperback |
| Yoly | 2 | 2 | | Hardback |
| | | | | $\begin{bmatrix} \$9.95 \\ \$22.95 \end{bmatrix} = B$ |

- a. Calculate AB and explain what this matrix represents.

- b. Which friend spent more money? How much more did she spend than her friend?

In 3–6, multiply the matrices.

3. $\begin{bmatrix} 9 & -4 \\ 5 & 1 \end{bmatrix} \begin{bmatrix} -3 \\ 8 \end{bmatrix}$

4. $\begin{bmatrix} 0.5 & 10 \\ -4 & 3.2 \end{bmatrix} \begin{bmatrix} 6 \\ 20 \end{bmatrix}$

5. $\begin{bmatrix} 6 & 1 \\ -1 & 12 \end{bmatrix} \begin{bmatrix} 1 & -3 \\ 4 & 0 \end{bmatrix}$

6. $\begin{bmatrix} -8 & 2 \\ 0 & 0.4 \end{bmatrix} \begin{bmatrix} 7 & 2.5 \\ 1 & 1 \end{bmatrix}$

7. Solve for k : $\begin{bmatrix} k & -4 \\ 5 & 2 \end{bmatrix} \begin{bmatrix} 7 \\ -1 \end{bmatrix} = \begin{bmatrix} 53 \\ 33 \end{bmatrix}$ _____