

Name _____

10-7B Lesson Master**Questions on SPUR Objectives**

See pages 650–653 for objectives.

SKILLS Objective C

In 1–3, use the system given.

a. Write the coefficient matrix.

b. Write the variable matrix.

c. Write the constant matrix.

1.
$$\begin{cases} -4x + 3y = 2 \\ 8x - 2y = 6 \end{cases}$$

a. _____

b. _____

c. _____

2.
$$\begin{cases} 4x - 2y = 0 \\ 4y + 3x = 3 \end{cases}$$

a. _____

b. _____

c. _____

3.
$$\begin{cases} 5x + 8y = -1 \\ -2x - y = 12 \end{cases}$$

a. _____

b. _____

c. _____

4. Ruben and Deborah bought school supplies. The matrices below represent how many notebooks and pencils each purchased and the cost of each item.

	Notebooks	Pencils		Cost
Ruben	3	8	$= A$	Notebook
Deborah	5	5		Pencil

$$\begin{bmatrix} 0.95 \\ 0.35 \end{bmatrix} = B$$

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

- b. Which person spent more money? How much more did that person spend?

5. The matrix equation $\begin{bmatrix} 5 & -2 \\ -8 & 3 \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 12 \\ 34 \end{bmatrix}$ describes a system of equations.

Write the system. _____

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6. Solve for a , b , c , and d : $\begin{bmatrix} a & b \\ c & d \end{bmatrix} \begin{bmatrix} x \\ y \end{bmatrix} = \begin{bmatrix} 2x + 3y \\ 4x - 7y \end{bmatrix}$

In 7-14, multiply.

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

8. $\begin{bmatrix} -0.25 & 3 \\ 8 & 2 \end{bmatrix} \begin{bmatrix} -4 \\ -7 \end{bmatrix}$

9. $\begin{bmatrix} -2.8 & 7 \\ 3 & -1 \end{bmatrix} \begin{bmatrix} 8 \\ 0 \end{bmatrix}$

10. $\begin{bmatrix} 2 & 1 \\ 3 & 8 \end{bmatrix} \begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$

11. $\begin{bmatrix} 3 & 8 \\ 7 & 6 \end{bmatrix} \begin{bmatrix} 1 \\ 0 \end{bmatrix}$

12. $\begin{bmatrix} 4 & 8 \\ 1 & 2 \end{bmatrix} \begin{bmatrix} 2 & 1 \\ 3 & 5 \end{bmatrix}$

13. $\begin{bmatrix} 6 & 1 \\ -2 & 0.3 \end{bmatrix} \begin{bmatrix} -2 & 3 \\ 1 & 0 \end{bmatrix}$

14. $\begin{bmatrix} 4 & 3 \\ 2 & 2 \end{bmatrix} \begin{bmatrix} 1 & -\frac{3}{2} \\ -1 & 2 \end{bmatrix}$

In 15 and 16, solve for k .

15. $\begin{bmatrix} -2 & 4 \\ 6 & k \end{bmatrix} \begin{bmatrix} 2 \\ -3 \end{bmatrix} = \begin{bmatrix} -16 \\ 15 \end{bmatrix}$

16. $\begin{bmatrix} 6 & k \\ 0 & 5 \end{bmatrix} \begin{bmatrix} -2 \\ 1 \end{bmatrix} = \begin{bmatrix} -9 \\ 5 \end{bmatrix}$
