

Name _____

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

See Student Edition pages 293–297 for objectives.

SKILLS Objective C

In 1–8, perform the indicated operation.

1. $[-4 \ 1 \ 0] \cdot \begin{bmatrix} 6 \\ 2 \\ -3 \end{bmatrix}$

2. $\begin{bmatrix} -2 & -6 & 0 \\ 7 & 2 & 2 \end{bmatrix} \cdot \begin{bmatrix} 5 & 2 \\ 0 & 1 \\ 4 & 8 \end{bmatrix}$

3. $\begin{bmatrix} 9 & -1 & 6 \\ 5 & 3 & 4 \\ 8 & -6 & 3 \end{bmatrix} \cdot \begin{bmatrix} 6 & 3 & -2 \\ 8 & 5 & 7 \\ 4 & 2 & 4 \end{bmatrix}$

4. $\begin{bmatrix} -4 & 5 & 0 \\ 0 & 6 & 4 \\ 0 & -7 & 2 \\ 1 & 8 & 1 \end{bmatrix} \cdot \begin{bmatrix} 5 & 6 & 6 & 2 \\ 0 & 1 & 0 & 1 \\ 4 & -2 & -6 & 2 \end{bmatrix}$

5. $\begin{bmatrix} 3.8 & 4.8 \\ 3.5 & 0 \\ 0.6 & 8.1 \end{bmatrix} \cdot \begin{bmatrix} 4.1 & -0.3 & 2.6 \\ 5.5 & -1.7 & 5.2 \end{bmatrix}$

6. $\begin{bmatrix} 5 & 5 \\ 7 & -3 \end{bmatrix} \cdot \begin{bmatrix} 6 & -2 \\ 4 & -8 \end{bmatrix}$

7. $\begin{bmatrix} -5 & -9 \\ 7 & 2 \\ 0 & -4 \end{bmatrix} \cdot \begin{bmatrix} 5 & -1 & 2 \\ 0 & 0 & 2 \end{bmatrix}$

8. $[0 \ -4 \ 8] \left(\begin{bmatrix} 2 & 6 & -2 \\ 1 & 1 & 1 \\ 3 & 7 & 4 \end{bmatrix} \cdot \begin{bmatrix} 9 & 0 & -1 \\ 3 & 2 & 1 \\ 3 & 4 & 8 \end{bmatrix} \right)$

PROPERTIES Objective E

9. a. Calculate $\left([0 \ -4 \ 8] \cdot \begin{bmatrix} 2 & 6 & -2 \\ 1 & 1 & 1 \\ 3 & 7 & 4 \end{bmatrix} \right) \begin{bmatrix} 9 & 0 & -1 \\ 3 & 2 & 1 \\ 3 & 4 & 8 \end{bmatrix}$ _____

b. How does your answer compare to your answer in Question 8? What does this illustrate?

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10. If $\begin{bmatrix} 5 & 6 & 6 & 2 \\ 0 & 1 & 0 & 1 \end{bmatrix} \cdot H = \begin{bmatrix} 38 \\ 8 \end{bmatrix}$ what are the dimensions of H ? _____

Fill in the Blanks In 11 and 12, fill in the blanks to complete each statement.

11. The product of two matrices A and B exists only when the number of _____ of A is equal to the number of _____ of B .
12. Suppose G , H , and M are matrices. If $G \cdot H = M$, the product of row i of G and column j of H is the element located in row _____ and column _____ of M .

USES Objective J

13. A band went to a football game in 2 vans, 6 cars, and one bus. There were 8 band members in each van, 5 in each car, and 38 in the bus. Write V , the vehicle matrix, and N , the matrix showing the number of band members in each vehicle. Write V as a row and N as a column. Calculate VN and then tell what VN represents.

$V =$ _____ $N =$ _____ $VN =$ _____

14. Music Boosters ordered sweatshirts that cost \$12 for infants, \$14 for kids, \$17 for adult, and \$20 for extra large. In gray, they ordered 6 infant size, 8 kid size, 12 adult size, and 14 XL. In black, they ordered 2 infant size, 5 kid size, 10 adult size, and 15 XL. Write C , the cost matrix and N , the matrix showing the number of sweatshirts ordered. Calculate CN and tell what it represents.

$C =$ _____ $N =$ _____

$CN =$ _____
