

12.2 Puzzle Time

How Do You Organize A Space Party?

Write the letter of each answer in the box containing the exercise number.

Determine whether the product AB is defined. If so, state the dimensions of AB

1. $A: 2 \times 4, B: 4 \times 3$

2. $A: 4 \times 2, B: 4 \times 2$

3. $A = \begin{bmatrix} 14 & -2 \\ 9 & 10 \\ -13 & 8 \end{bmatrix}, B = \begin{bmatrix} -13 & 10 & -10 & -15 & -13 \\ -3 & 9 & 0 & -5 & -1 \end{bmatrix}$

4. $A = \begin{bmatrix} 6 \\ 7 \\ 0 \\ 12 \end{bmatrix}, B = \begin{bmatrix} 6 & -2 & 8 \end{bmatrix}$

Find the product.

5. $\begin{bmatrix} 4 & -2 \\ 9 & 10 \\ -5 & 8 \end{bmatrix} \begin{bmatrix} -6 & 10 \\ -3 & 9 \end{bmatrix}$

6. $\begin{bmatrix} 5 & -6 \end{bmatrix} \begin{bmatrix} 8 \\ 2 \end{bmatrix}$

Use the given matrices to evaluate the expression.

$A = \begin{bmatrix} 5 & 9 \\ 5 & -4 \end{bmatrix}, B = \begin{bmatrix} -5 & 10 \\ -1 & -2 \end{bmatrix}, C = \begin{bmatrix} -4 & -6 \\ 3 & -2 \end{bmatrix}$

7. $AB + C$

8. $AB - AC$

9. $(A - B)C$

Answers

R. defined; 4×4

U. defined; 3×5

J. defined; 1×3

O. not defined

S. defined; 5×3

Y. defined; 2×3

P. defined; 4×3

L. $\begin{bmatrix} -18 & 22 \\ -84 & 180 \\ 6 & 22 \end{bmatrix}$

N. $\begin{bmatrix} -38 & 26 \\ -18 & 56 \end{bmatrix}$

Q. $\begin{bmatrix} -76 & 16 \\ 18 & 1 \end{bmatrix}$

A. $[28]$

T. $\begin{bmatrix} -43 & -58 \\ -30 & -32 \end{bmatrix}$

U. $\begin{bmatrix} -45 & -1 \\ 7 & -14 \end{bmatrix}$

E. $\begin{bmatrix} -41 & 80 \\ 11 & 80 \end{bmatrix}$

B. $\begin{bmatrix} -34 & 32 \\ -21 & 58 \end{bmatrix}$

1	2	3		4	5	6	7	8	9
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