

Answer Key

Practice A

1. AB is not defined. 2. AB is defined; $AB: 3 \times 3$ 3. AB is defined; $AB: 2 \times 1$

4. AB is defined; $AB: 3 \times 2$ 5. AB is not defined. 6. AB is defined; $AB: 3 \times 5$ 7. AB is not defined. 8. AB is defined; $AB: 2 \times 4$ 9. AB is defined; $AB: 1 \times 1$ 10. $(4)(2) + (-2)(3);$

$(4)(1) + (-2)(-2); (4)(0) + (-2)(4)$

11. $(-2)(-4); (-2)(6); (3)(-4); (3)(6)$

12. $(2)(-1) + (1)(4); (0)(-1) + (-3)(4)$

13. $[14]$ 14. $[1 \ 0]$ 15. $[2 \ 1]$

16. $\begin{bmatrix} 3 & -12 \\ 1 & -4 \end{bmatrix}$ 17. $\begin{bmatrix} -2 & 3 \\ -4 & 6 \end{bmatrix}$

18. The matrices cannot be multiplied because

the number of columns in $\begin{bmatrix} 2 \\ 3 \end{bmatrix}$ does not equal the

number of rows in $\begin{bmatrix} 1 & -2 \\ 3 & 1 \end{bmatrix}$.

19. $\begin{bmatrix} -1 & 3 \\ 2 & 5 \end{bmatrix}$ 20. $[-13]$ 21. $\begin{bmatrix} 3 & 2 \\ -1 & 4 \end{bmatrix}$

22.

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|----------------------|---|
| Opening night | $\begin{bmatrix} \$2220 \end{bmatrix}$ |
| Second night | $\begin{bmatrix} \$2525 \end{bmatrix}$ |
| Final night | $\begin{bmatrix} \$2972.50 \end{bmatrix}$ |