Lesson 3.6, continued

Practice Level A

1. defined; 2×3 **2.** defined; 4×1 **3.** *not* defined **4.** *not* defined **5.** defined; 5×2

6. defined; 1×1 **7.** (2)(2) + (4)(2)

8. (2)(5); (1)(4); (1)(5) **9.** $\begin{bmatrix}10\end{bmatrix}$

10. $\begin{bmatrix}-8 & -2\end{bmatrix}$ **11.** $\begin{bmatrix}-1 & -5\end{bmatrix}$

12. $\begin{bmatrix}-8 & -16\\ -4 & -8\end{bmatrix}$

13. 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 $\begin{bmatrix}-1 & 2\\ -5 & 0\end{bmatrix}$.

14. $\begin{bmatrix}-4 & 8\\ -10 & 19\end{bmatrix}$ **15.** $\begin{bmatrix}3 & -4\\ -1 & 2\end{bmatrix}$ **16.** $\begin{bmatrix}15\end{bmatrix}$

17. $\begin{bmatrix}6 & -4\\ 2 & 5\end{bmatrix}$ **18.** $\begin{bmatrix}2 & 0\\ -3 & 7\end{bmatrix}$

19. $\begin{bmatrix}-3 & 4 & -3\\ 11 & 4 & -13\\ 8 & 4 & -4\end{bmatrix}$ **20.** Game 1 $\begin{bmatrix}\$1975.00\\ \$1887.50\\ \$2300.00\end{bmatrix}$ Game 2, Game 3

Practice Level B

1. A: 3×2; B: 1×3; *not* defined **2.** A: 2×3; B: 3×3; defined; 2×3

3. $\begin{bmatrix}11\end{bmatrix}$ **4.** $\begin{bmatrix}1 & -4\\ 5 & -2\end{bmatrix}$ **5.** $\begin{bmatrix}-2 & 6\\ 1 & -3\\ -3 & 9\end{bmatrix}$

6. $\begin{bmatrix}26 & -3\\ 12 & 2\end{bmatrix}$ **7.** $\begin{bmatrix}-5 & 15 & -11\\ 4 & 10 & 20\\ 8 & 6 & 16\end{bmatrix}$

8. The matrices cannot be multiplied because the number of columns in $\begin{bmatrix}2\\1\end{bmatrix}$ does not equal the number of rows in $\begin{bmatrix}1 & 2 & 4\\ -2 & 3 & 1\end{bmatrix}$.

9. $\begin{bmatrix}1\end{bmatrix}$ **10.** $\begin{bmatrix}-11 & -7 & -8\\ -2 & -2 & -8\\ -5 & -3 & -2\end{bmatrix}$ **11.** $\begin{bmatrix}-3\\ -6\\ -16\\ 8\end{bmatrix}$

12. $\begin{bmatrix}-6 & 4\\ -22 & 28\end{bmatrix}$ **13.** $\begin{bmatrix}8 & -10\\ -2 & 6\end{bmatrix}$

14. $\begin{bmatrix}5 & -3\\ 11 & -21\end{bmatrix}$ **15.** Game 1 $\begin{bmatrix}\$1361\\ \$1625\end{bmatrix}$ Game 2

Practice Level C

1. $\begin{bmatrix}4 & 21\\ -14 & 31\end{bmatrix}$

2. The matrices cannot be multiplied because the number of columns in $\begin{bmatrix}3 & -1 & 0\\ 2 & 5 & -4\end{bmatrix}$ does not equal the number of rows in $\begin{bmatrix}1 & 0\\ 0 & 1\end{bmatrix}$.

3. $\begin{bmatrix}-2 & 6\\ -2 & -1\\ 9 & 8\end{bmatrix}$ **4.** $\begin{bmatrix}1 & 2\\ -17 & 12\\ -9 & 5\end{bmatrix}$

5. $\begin{bmatrix}4 & -7 & -2\\ 14 & -6 & 16\end{bmatrix}$ **6.** $\begin{bmatrix}-4 & -6 & 2\\ -2 & -3 & 1\\ 6 & 9 & -3\\ 8 & 12 & -4\end{bmatrix}$

7. $\begin{bmatrix}-4 & -8\\ -2 & 3\end{bmatrix}$ **8.** $\begin{bmatrix}4 & 7\\ 1 & -\frac{1}{2}\\ 3 & \frac{13}{2}\end{bmatrix}$

9. $\begin{bmatrix}-1 & -21\\ 2 & 6\\ -2 & -22\end{bmatrix}$ **10.** $\begin{bmatrix}-2 & 3\\ 35 & -14\\ 13 & -8\end{bmatrix}$

11. $\begin{bmatrix}14 & 35\\ 8 & 2\\ 8 & 30\end{bmatrix}$ **12.** $\begin{bmatrix}-35 & -17\\ 30 & 22\\ 5 & 1\end{bmatrix}$

13. $x = 3, y = 4$ **14.** $x = -3, y = -1$

15. $AB = \begin{bmatrix}0 & -2 & -4\\ -1 & -3 & -1\end{bmatrix}$; reflection through the origin

16. candidate A: 1052; candidate B: 1098

Study Guide

1. $\begin{bmatrix}4 & 12\\ -2 & -6\end{bmatrix}$ **2.** $\begin{bmatrix}-7 & 14\\ -13 & 34\end{bmatrix}$ **3.** $\begin{bmatrix}-3 & 19\\ -61 & 3\end{bmatrix}$

4. $\begin{bmatrix}29 & -35\\ 10 & -13\end{bmatrix}$ **5.** $\begin{bmatrix}48 & -68\\ 24 & -26\end{bmatrix}$ **6.** $\begin{bmatrix}2 & -32\\ 11 & -14\end{bmatrix}$

7. \$28