**Math 1 Chapter A Practice Test Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Hour\_\_\_\_\_\_**

**Show your work if you expect to receive full or partial credit. Place your answer in the space provided.**

**Solve each matrix equation.**

1. B + $\left[\begin{array}{c}4 7\\0 3\\1 6\end{array}\right] $= $\left[\begin{array}{c}4 2\\9 -2\\2 -1\end{array}\right]$ 2. C – $\left[\begin{array}{c}0 -3\\2 -6\end{array}\right]$ = $\left[\begin{array}{c}-4 5\\-2 6\end{array}\right]$ 1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 2.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Find the value of each variable.**

3. $\left[\begin{array}{c}10 -3 -2\\1 11 -1\end{array}\right]$ = $\left[\begin{array}{c}3x+1 -3 2-y\\ 1 3x+2 -1\end{array}\right]$ 4. $\left[\begin{array}{c}2 3\\1 -1\end{array}\right]\left[\begin{array}{c}x\\y\end{array}\right]$ = $\left[\begin{array}{c}-2\\ 4\end{array}\right]$ 3.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 4.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**For questions 5 – 12, use the following matrices to perform each operation.**

 **A =** $\left[\begin{array}{c}4 5\\4-5\end{array}\right]$ **B =** $\left[\begin{array}{c} -4 2\\ 10 5\end{array}\right]$ **C=** $\left[\begin{array}{c} 2-2 6\\-4 3 8\end{array}\right]$ **D=** $\left[\begin{array}{c}5 3 1\\2 7 4\end{array}\right]$

5. Find 2A 6. Find A + B 7. Find D – C 5.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 6.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 7.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 8.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

8. Find AC 9. Find 3BD 10. Find (A+B)D 9.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 10.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 11.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

11. Find detA 12. Find $A^{-1}$ 13. Find detB 12.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 13.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

14. Find $B^{-1}$ 14.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Solve each system of equations using matrices.

15. 2x - 5y = 5 16. 2x – y = 7 15.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 x – y = 4 -4x + 2y = -14

 16.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

17. 2x + 5y = 7 17.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 3x - y = 5

**Find the Determinant. Find the inverse matrix.** 18.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

18. $\left[\begin{matrix}1&0&0\\-1&2&3\\4&-1&2\end{matrix}\right]$ 19. $\left[\begin{matrix}-2&1&-1\\2&0&4\\0&2&5\end{matrix}\right]$

 19. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_