8th ALL Unit 6 Review: Matrices Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Perform the given operation with the given matrices.

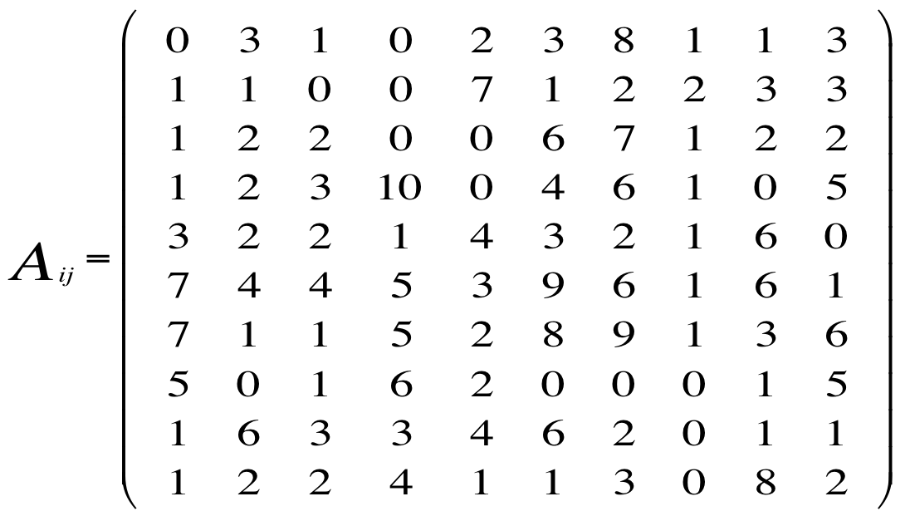
1. + 2. 3. -3

K = 4. Write the additive identity for matrix K:

5. Write the additive inverse for matrix K:

W = 6. Find W – K

7. Find 2K + W



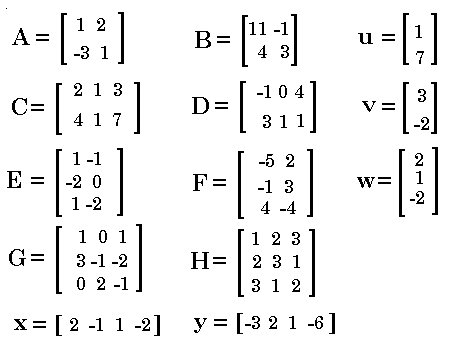
8. What are the dimensions of matrix P?

9. What is element P4,3 ? P = P =

Find the determinants:

10. 11. 12.

13. Solve for x:

Perform the following multiplications if possible:

14. BA

15. FD

16. EH J = K =

17. JK

18. CJ

19. If M = GH, then find M3,2 without multiplying all of G\*H.

Write an augmented matrix for each system of linear equations:

20. 21.

Write the system of equations that generated each matrix:

22. 23.

Stop being afraid of what could go wrong and start being excited about what could go right.

Solve the following systems using matrix row reduction:

24.

25.

Use the value of the determinant to decide if the system of equations will have one solution. **Do NOT actually solve it**.

26. 27. 28.

determinant = determinant = determinant =

one solution? yes / no one solution? yes / no one solution? yes / no

Use the above determinants to determine whether the matrices from #26 - #28 have inverses:

29. inverse? yes / no 30. inverse? yes / no 31. inverse? yes / no

32. Write and

Use the formula for the inverse of a 2x2 matrix to find the inverse of each matrix:

33. 34. 35.

36. Use augmented matrices and row operations to find the inverse of :

37. Use the inverse you found in #36 to solve this system of equations using inverse matrices:

38. The inverse of matrix M = is M-1 =

Use this information to solve the following system of equations using inverse matrices:

Image result for matrix39. What is the solution to the system represented by this matrix?