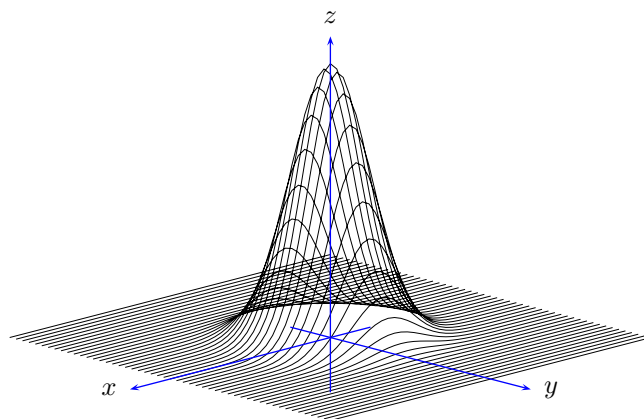


**MathCon**  
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# 100 Matrices Inversas



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# Contenido

1. Matrices Inversas

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# Capítulo 1

## Matrices Inversas

$$1. A = \begin{pmatrix} 1 & -1 & 0 \\ 0 & 1 & 1 \\ 0 & -1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 1 & 0 & -1 \\ 0 & 0 & -1 \\ 0 & 1 & 1 \end{pmatrix}$$

$$2. A = \begin{pmatrix} 0 & 1 & 0 \\ 1 & 1 & 1 \\ 0 & 1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -2 & 1 & 1 \\ 1 & 0 & 0 \\ 1 & 0 & -1 \end{pmatrix}$$

$$3. A = \begin{pmatrix} -1 & 0 & -1 \\ -1 & 1 & 1 \\ -1 & 0 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 0 & -1 \\ 1 & 1 & -2 \\ -1 & 0 & 1 \end{pmatrix}$$

$$4. A = \begin{pmatrix} 0 & -1 & 0 \\ 0 & 0 & 1 \\ -1 & 1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & -1 & -1 \\ -1 & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}$$

$$5. A = \begin{pmatrix} 0 & -1 & 1 \\ 0 & 0 & -1 \\ 1 & 0 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 0 & 1 \\ -1 & -1 & 0 \\ 0 & -1 & 0 \end{pmatrix}$$

$$6. A = \begin{pmatrix} 1 & 1 & 1 \\ 0 & 1 & 0 \\ -1 & 0 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 0 & -1 \\ 0 & 1 & 0 \\ 1 & -1 & 1 \end{pmatrix}$$

$$7. A = \begin{pmatrix} -1 & 1 & 1 \\ 1 & -1 & 1 \\ -1 & -1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{1}{2} & 0 & -\frac{1}{2} \\ 0 & -\frac{1}{2} & -\frac{1}{2} \\ \frac{1}{2} & \frac{1}{2} & 0 \end{pmatrix}$$

$$8. A = \begin{pmatrix} -1 & 1 & 1 \\ 1 & 1 & -1 \\ 1 & 1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{1}{2} & 0 & \frac{1}{2} \\ \frac{1}{2} & \frac{1}{2} & 0 \\ 0 & -\frac{1}{2} & \frac{1}{2} \end{pmatrix}$$

$$9. A = \begin{pmatrix} 1 & -1 & -1 \\ -1 & 0 & 1 \\ 1 & -1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{1}{2} & -1 & \frac{1}{2} \\ -1 & -1 & 0 \\ -\frac{1}{2} & 0 & \frac{1}{2} \end{pmatrix}$$

$$10. A = \begin{pmatrix} 1 & -1 & -1 \\ -1 & 0 & -1 \\ 1 & 0 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 0 & 1 \\ -1 & 1 & 2 \\ 0 & -1 & -1 \end{pmatrix}$$

$$11. A = \begin{pmatrix} 0 & -1 & 1 \\ -1 & 1 & -1 \\ -1 & -1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & -1 & 0 \\ 1 & 1 & -1 \\ 2 & 1 & -1 \end{pmatrix}$$

$$12. A = \begin{pmatrix} 0 & -1 & 1 \\ -1 & 1 & -1 \\ -1 & -1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & -1 & 0 \\ 1 & 1 & -1 \\ 2 & 1 & -1 \end{pmatrix}$$

$$13. A = \begin{pmatrix} 1 & 0 & 2 \\ 0 & 2 & 0 \\ 1 & 2 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & -2 & 2 \\ 0 & \frac{1}{2} & 0 \\ 1 & 1 & -1 \end{pmatrix}$$

$$14. A = \begin{pmatrix} 0 & 2 & -1 \\ 0 & 1 & 0 \\ 2 & 1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{1}{2} & -\frac{3}{2} & \frac{1}{2} \\ 0 & 1 & 0 \\ -1 & 2 & 0 \end{pmatrix}$$

$$15. A = \begin{pmatrix} 0 & 1 & 0 \\ 1 & 2 & 1 \\ 1 & 1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 0 & 1 \\ 1 & 0 & 0 \\ -1 & 1 & -1 \end{pmatrix}$$

$$16. A = \begin{pmatrix} 0 & 1 & 0 \\ 1 & 2 & 1 \\ 1 & 1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 0 & 1 \\ 1 & 0 & 0 \\ -1 & 1 & -1 \end{pmatrix}$$

$$17. A = \begin{pmatrix} 0 & 0 & 2 \\ 0 & 1 & 1 \\ 1 & 0 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 0 & 2 \\ -1 & 1 & 1 \\ 1 & 0 & -1 \end{pmatrix}$$

$$18. A = \begin{pmatrix} 0 & 0 & 2 \\ 0 & 1 & 1 \\ 1 & 0 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 0 & 2 \\ -1 & 1 & 1 \\ 1 & 0 & -1 \end{pmatrix}$$

$$19. A = \begin{pmatrix} -1 & 2 & 1 \\ 0 & 1 & 2 \\ 1 & -1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 2 & -1 & 3 \\ 2 & -1 & 2 \\ -1 & 1 & -1 \end{pmatrix}$$

$$20. A = \begin{pmatrix} -1 & 2 & 1 \\ 0 & 1 & 2 \\ 1 & -1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 2 & -1 & 3 \\ 2 & -1 & 2 \\ -1 & 1 & -1 \end{pmatrix}$$

$$21. A = \begin{pmatrix} 3 & 0 & -2 \\ 0 & -1 & -2 \\ -2 & -1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 2 & -2 \\ 4 & -7 & 6 \\ -2 & 3 & -3 \end{pmatrix}$$

$$22. A = \begin{pmatrix} 3 & 0 & -2 \\ 0 & -1 & -2 \\ -2 & -1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 2 & -2 \\ 4 & -7 & 6 \\ -2 & 3 & -3 \end{pmatrix}$$

$$23. A = \begin{pmatrix} -2 & -2 & 3 \\ 1 & 3 & 2 \\ -1 & 0 & 3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 9 & 6 & -13 \\ -5 & -3 & 7 \\ 3 & 2 & -4 \end{pmatrix}$$

$$24. A = \begin{pmatrix} -2 & -2 & 3 \\ 1 & 3 & 2 \\ -1 & 0 & 3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 9 & 6 & -13 \\ -5 & -3 & 7 \\ 3 & 2 & -4 \end{pmatrix}$$

$$25. A = \begin{pmatrix} 2 & 3 & -1 \\ 1 & 1 & 0 \\ -2 & -2 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 5 & 1 \\ 1 & -4 & -1 \\ 0 & -2 & -1 \end{pmatrix}$$

$$26. A = \begin{pmatrix} 2 & 3 & -1 \\ 1 & 1 & 0 \\ -2 & -2 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 5 & 1 \\ 1 & -4 & -1 \\ 0 & -2 & -1 \end{pmatrix}$$

$$27. A = \begin{pmatrix} 0 & 1 & 3 \\ -1 & 0 & 2 \\ 1 & 0 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 1 & 2 \\ 1 & -3 & -3 \\ 0 & 1 & 1 \end{pmatrix}$$

$$28. A = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 2 & 3 \\ -1 & 0 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 4 & -2 & 1 \\ -5 & 3 & -2 \\ 2 & -1 & -1 \end{pmatrix}$$

$$29. A = \begin{pmatrix} 3 & 3 & 2 \\ 3 & 2 & 2 \\ -1 & 1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 4 & 5 & 2 \\ 1 & -1 & 0 \\ 5 & -6 & -3 \end{pmatrix}$$

$$30. A = \begin{pmatrix} -1 & 2 & 1 \\ -2 & 1 & -2 \\ 1 & -3 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -8 & 1 & -5 \\ -6 & 1 & -4 \\ 5 & -1 & 3 \end{pmatrix}$$

$$31. A = \begin{pmatrix} -2 & 2 & -1 \\ -2 & 1 & 2 \\ -3 & 2 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -2 & -6 & 5 \\ -2 & -7 & 6 \\ -1 & -2 & 2 \end{pmatrix}$$

$$32. A = \begin{pmatrix} -1 & 1 & 1 \\ -2 & -3 & 1 \\ 3 & 1 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 5 & 3 & 4 \\ -1 & -1 & -1 \\ 7 & 4 & 5 \end{pmatrix}$$

$$33. A = \begin{pmatrix} 1 & 2 & 3 \\ 0 & 2 & 3 \\ 1 & 2 & 4 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 1 & -1 & 0 \\ \frac{3}{2} & \frac{1}{2} & -\frac{3}{2} \\ -1 & 0 & 1 \end{pmatrix}$$

$$34. A = \begin{pmatrix} 1 & 1 & 1 \\ 1 & 2 & 3 \\ 0 & 1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 1 & 0 & -1 \\ 1 & -1 & 2 \\ -1 & 1 & -1 \end{pmatrix}$$

$$35. A = \begin{pmatrix} 0 & 4 & 5 \\ 1 & 0 & 9 \\ 0 & 5 & 6 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -45 & 1 & 36 \\ -6 & 0 & 5 \\ 5 & 0 & -4 \end{pmatrix}$$

$$36. A = \begin{pmatrix} 0 & 0 & 1 \\ 2 & 5 & 1 \\ 1 & 3 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 7 & 3 & -5 \\ -3 & -1 & 2 \\ 1 & 0 & 0 \end{pmatrix}$$

$$37. A = \begin{pmatrix} -1 & 1 & 7 \\ -1 & -2 & 2 \\ -3 & -5 & 8 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -6 & -43 & 16 \\ 2 & 13 & -5 \\ -1 & -8 & 3 \end{pmatrix}$$

$$38. A = \begin{pmatrix} 1 & 0 & -1 \\ 2 & -2 & -3 \\ -3 & -1 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -7 & 1 & -2 \\ 5 & -1 & 1 \\ -8 & 1 & -2 \end{pmatrix}$$

$$39. A = \begin{pmatrix} -1 & 8 & -1 \\ -1 & 8 & 0 \\ -1 & 9 & 6 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 48 & -57 & 8 \\ 6 & -7 & 1 \\ -1 & 1 & 0 \end{pmatrix}$$

$$40. A = \begin{pmatrix} 3 & 2 & 1 \\ 2 & 5 & 5 \\ 3 & 6 & 6 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & -2 & \frac{5}{3} \\ 1 & 5 & -\frac{13}{3} \\ -1 & -4 & \frac{11}{3} \end{pmatrix}$$

$$41. A = \begin{pmatrix} 3 & 2 & 1 \\ -5 & 1 & -1 \\ 5 & 6 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -8 & -2 & 3 \\ -5 & -1 & 2 \\ 35 & 8 & -13 \end{pmatrix}$$

$$42. A = \begin{pmatrix} -1 & -1 & 1 \\ -1 & 1 & -4 \\ 7 & 2 & 4 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 4 & 2 & 1 \\ -8 & -\frac{11}{3} & -\frac{5}{3} \\ -3 & -\frac{5}{3} & -\frac{3}{3} \end{pmatrix}$$

$$43. A = \begin{pmatrix} 0 & 2 & 2 \\ 7 & 2 & 5 \\ -2 & 1 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{5}{2} & 1 & 3 \\ -5 & 2 & 3 \\ \frac{11}{2} & -2 & -7 \end{pmatrix}$$

$$44. A = \begin{pmatrix} 3 & 5 & -2 \\ -3 & 3 & -1 \\ 2 & 0 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 0 & \frac{1}{9} \\ -1 & 2 & \frac{2}{9} \\ -3 & 5 & \frac{2}{9} \end{pmatrix}$$

$$45. A = \begin{pmatrix} -5 & 2 & 0 \\ -1 & 1 & 0 \\ 5 & -5 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{1}{3} & \frac{2}{3} & 0 \\ \frac{1}{3} & \frac{5}{3} & 0 \\ -\frac{3}{5} & \frac{3}{5} & 1 \end{pmatrix}$$

$$46. A = \begin{pmatrix} 5 & -2 & -5 \\ 6 & 0 & -3 \\ 8 & 1 & -3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & \frac{11}{3} & -2 \\ 2 & -\frac{25}{3} & 5 \\ -2 & \frac{7}{3} & -4 \end{pmatrix}$$

$$47. A = \begin{pmatrix} 5 & 3 & 0 \\ 9 & 3 & 3 \\ 9 & 8 & -3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 11 & -3 & -3 \\ -18 & 5 & 5 \\ -15 & \frac{13}{3} & 4 \end{pmatrix}$$

$$48. A = \begin{pmatrix} 5 & -1 & 1 \\ 6 & 2 & 5 \\ -2 & 0 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 1 & \frac{1}{2} & \frac{7}{2} \\ 2 & \frac{3}{2} & \frac{19}{2} \\ -2 & -1 & -8 \end{pmatrix}$$

$$49. A = \begin{pmatrix} 1 & 2 & -2 \\ -5 & 3 & 0 \\ -3 & 2 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & -2 & 3 \\ 0 & -3 & 5 \\ -\frac{1}{2} & -4 & \frac{13}{2} \end{pmatrix}$$

$$50. A = \begin{pmatrix} 9 & 3 & 0 \\ 5 & 6 & 5 \\ 2 & -1 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{7}{3} & -2 & -5 \\ -\frac{20}{3} & 6 & 15 \\ \frac{3}{17} & -5 & -13 \end{pmatrix}$$

$$51. A = \begin{pmatrix} -3 & 0 & 9 \\ -2 & 1 & 2 \\ -3 & 1 & 6 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{4}{3} & -3 & 3 \\ -2 & -3 & 4 \\ -\frac{1}{3} & -1 & 1 \end{pmatrix}$$

$$52. A = \begin{pmatrix} 1 & 6 & 5 \\ -3 & 0 & -5 \\ 3 & 2 & 6 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -5 & 13 & 15 \\ -\frac{3}{2} & \frac{9}{2} & 5 \\ \frac{3}{3} & -8 & -9 \end{pmatrix}$$

$$53. A = \begin{pmatrix} 1 & 2 & -1 \\ 3 & 6 & -1 \\ -1 & -3 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{15}{2} & \frac{7}{3} & 2 \\ \frac{2}{7} & -\frac{2}{3} & -1 \\ \frac{3}{3} & \frac{1}{1} & 0 \\ -\frac{1}{2} & \frac{1}{2} & 0 \end{pmatrix}$$

$$54. A = \begin{pmatrix} -2 & 2 & -1 \\ -5 & 6 & 0 \\ -3 & 1 & -5 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{10}{25} & -\frac{3}{7} & -\frac{2}{5} \\ \frac{3}{13} & -\frac{3}{4} & -\frac{3}{3} \\ -\frac{1}{3} & \frac{1}{3} & \frac{2}{3} \end{pmatrix}$$

$$55. A = \begin{pmatrix} -1 & 6 & 7 \\ -4 & 2 & 3 \\ 0 & 8 & 9 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 10 & -3 & -2 \\ -18 & \frac{9}{2} & \frac{25}{2} \\ 16 & -4 & -11 \end{pmatrix}$$

$$56. A = \begin{pmatrix} 3 & 1 & 0 \\ 9 & -1 & 7 \\ -1 & -1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 3 & -\frac{1}{2} & \frac{7}{2} \\ -8 & \frac{3}{2} & -\frac{21}{2} \\ -5 & 1 & -6 \end{pmatrix}$$

$$57. A = \begin{pmatrix} 8 & 7 & 9 \\ 8 & -2 & -4 \\ 5 & -3 & -5 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 1 & -4 & 5 \\ -10 & \frac{85}{2} & -52 \\ 7 & -\frac{59}{2} & 36 \end{pmatrix}$$

$$58. A = \begin{pmatrix} -3 & 0 & 2 \\ 8 & -3 & -3 \\ -3 & -3 & 4 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{7}{23} & 2 & -\frac{2}{7} \\ \frac{3}{11} & 2 & -\frac{7}{3} \\ 11 & 3 & -3 \end{pmatrix}$$

$$59. A = \begin{pmatrix} 6 & 7 & 3 \\ -1 & 9 & 8 \\ 1 & 3 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 3 & \frac{5}{2} & -\frac{29}{2} \\ -5 & -\frac{9}{2} & \frac{51}{2} \\ 6 & \frac{11}{2} & -\frac{61}{2} \end{pmatrix}$$

$$60. A = \begin{pmatrix} -5 & -3 & 9 \\ -2 & 6 & -3 \\ 0 & -1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{1}{2} & \frac{2}{5} & 15 \\ -\frac{3}{3} & \frac{3}{3} & 11 \\ -\frac{1}{3} & \frac{1}{3} & 12 \end{pmatrix}$$



$$61. A = \begin{pmatrix} -5 & 9 & 7 \\ -2 & 2 & 4 \\ -2 & 7 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 14 & \frac{49}{2} & -11 \\ 4 & -7 & -3 \\ 5 & -\frac{17}{2} & -4 \end{pmatrix}$$

$$62. A = \begin{pmatrix} -2 & -5 & -3 \\ 1 & 0 & -2 \\ 2 & 9 & 8 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -6 & -\frac{13}{3} & -\frac{10}{7} \\ 4 & \frac{10}{3} & \frac{3}{7} \\ -3 & -\frac{8}{3} & -\frac{5}{3} \end{pmatrix}$$

$$63. A = \begin{pmatrix} -2 & -3 & -1 \\ 6 & 5 & 5 \\ -1 & 8 & -5 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{65}{2} & -\frac{23}{9} & -5 \\ \frac{2}{25} & \frac{2}{9} & 2 \\ \frac{2}{53} & \frac{2}{19} & 4 \end{pmatrix}$$

$$64. A = \begin{pmatrix} 0 & -1 & 0 \\ 2 & 8 & 7 \\ 0 & 3 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{13}{2} & \frac{1}{2} & -\frac{7}{2} \\ -1 & 0 & 0 \\ 3 & 0 & 1 \end{pmatrix}$$

$$65. A = \begin{pmatrix} -2 & 7 & 0 \\ 2 & 3 & -1 \\ -3 & 9 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 3 & 0 & -\frac{7}{3} \\ 1 & 0 & -\frac{2}{3} \\ 9 & -1 & -\frac{20}{3} \end{pmatrix}$$

$$66. A = \begin{pmatrix} -1 & 5 & -1 \\ 2 & 7 & -1 \\ 1 & 0 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 0 & 0 & 1 \\ -\frac{1}{2} & \frac{1}{2} & -\frac{3}{2} \\ \frac{7}{2} & \frac{5}{2} & -\frac{17}{2} \end{pmatrix}$$

$$67. A = \begin{pmatrix} -5 & -1 & 1 \\ -3 & -1 & 9 \\ 7 & 1 & 8 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{17}{2} & \frac{9}{2} & -4 \\ \frac{87}{2} & -\frac{47}{2} & 21 \\ \frac{2}{2} & -1 & 1 \end{pmatrix}$$

$$68. A = \begin{pmatrix} 2 & 1 & 0 \\ 6 & 6 & 9 \\ 3 & 2 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -2 & -\frac{2}{3} & 3 \\ 5 & \frac{3}{4} & -6 \\ -2 & -\frac{3}{3} & 2 \end{pmatrix}$$

$$69. A = \begin{pmatrix} 2 & 3 & 0 \\ 2 & 3 & -2 \\ -1 & -2 & 9 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{23}{2} & \frac{27}{2} & 3 \\ 8 & -9 & -2 \\ \frac{1}{2} & -\frac{1}{2} & 0 \end{pmatrix}$$

$$70. A = \begin{pmatrix} -5 & 9 & -5 \\ 1 & -1 & -1 \\ -5 & 8 & -3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{11}{2} & -\frac{13}{2} & -7 \\ 4 & -5 & -5 \\ \frac{3}{2} & -\frac{5}{2} & -2 \end{pmatrix}$$

$$71. A = \begin{pmatrix} -5 & -1 & -1 \\ -3 & 6 & 1 \\ 8 & 3 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{9}{2} & \frac{1}{2} & -\frac{5}{2} \\ -7 & 1 & -4 \\ \frac{57}{2} & -\frac{7}{2} & \frac{33}{2} \end{pmatrix}$$

$$72. A = \begin{pmatrix} 9 & -2 & 8 \\ -2 & 3 & -2 \\ -1 & 0 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 1 & \frac{2}{3} & \frac{20}{3} \\ 0 & \frac{1}{3} & -\frac{3}{2} \\ -1 & -\frac{2}{3} & -\frac{23}{3} \end{pmatrix}$$

$$73. A = \begin{pmatrix} 8 & -3 & -3 \\ -5 & 6 & 5 \\ -5 & -2 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 2 & \frac{3}{2} & \frac{3}{2} \\ -15 & -\frac{23}{2} & -\frac{25}{2} \\ 20 & \frac{31}{2} & \frac{33}{2} \end{pmatrix}$$

$$74. A = \begin{pmatrix} 2 & 2 & 1 \\ 6 & -1 & 1 \\ -3 & -2 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -1 & 0 & -1 \\ -1 & -\frac{1}{3} & -\frac{4}{3} \\ 5 & \frac{2}{3} & \frac{14}{3} \end{pmatrix}$$

$$75. A = \begin{pmatrix} 1 & -1 & -3 \\ 6 & 2 & 1 \\ 9 & 1 & -3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{7}{2} & -3 & \frac{5}{2} \\ \frac{27}{2} & 12 & -\frac{19}{2} \\ -6 & -5 & 4 \end{pmatrix}$$

$$76. A = \begin{pmatrix} 9 & -5 & 5 \\ 5 & 5 & -3 \\ -2 & -3 & 2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{1}{4} & -\frac{5}{4} & -\frac{5}{2} \\ -\frac{4}{7} & \frac{4}{7} & \frac{2}{13} \\ \frac{5}{4} & \frac{37}{4} & \frac{35}{2} \end{pmatrix}$$

$$77. A = \begin{pmatrix} 1 & 1 & 2 \\ -5 & 7 & 9 \\ 3 & 5 & 9 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -9 & -\frac{1}{2} & \frac{5}{2} \\ -36 & -\frac{3}{2} & \frac{19}{2} \\ 23 & 1 & -6 \end{pmatrix}$$

$$78. A = \begin{pmatrix} 7 & 5 & 8 \\ -3 & 3 & 1 \\ 5 & -3 & 0 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{3}{2} & 12 & \frac{19}{2} \\ \frac{5}{2} & 20 & \frac{31}{2} \\ -\frac{2}{3} & -23 & -18 \end{pmatrix}$$

$$79. A = \begin{pmatrix} 1 & 1 & 8 \\ 2 & -2 & -2 \\ -2 & 2 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{1}{2} & \frac{15}{4} & \frac{7}{9} \\ \frac{1}{17} & \frac{4}{17} & \frac{2}{9} \\ \frac{2}{0} & \frac{4}{-1} & \frac{2}{-1} \end{pmatrix}$$

$$80. A = \begin{pmatrix} 1 & -3 & 7 \\ 8 & -5 & 8 \\ 6 & -5 & 9 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{5}{3} & \frac{8}{3} & -\frac{11}{3} \\ \frac{8}{10} & \frac{11}{13} & -\frac{16}{19} \\ \frac{10}{3} & \frac{13}{3} & -\frac{19}{3} \end{pmatrix}$$

$$81. A = \begin{pmatrix} 8 & -1 & 9 \\ 9 & 5 & 1 \\ 1 & 2 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{6}{19} & \frac{8}{25} & -\frac{23}{73} \\ \frac{2}{13} & -\frac{2}{17} & \frac{2}{49} \\ \frac{2}{2} & -\frac{2}{2} & \frac{2}{2} \end{pmatrix}$$

$$82. A = \begin{pmatrix} 9 & 9 & 7 \\ -5 & 3 & -1 \\ 5 & 8 & 5 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{23}{2} & \frac{11}{2} & -15 \\ \frac{10}{55} & \frac{5}{27} & -13 \\ -\frac{55}{2} & -\frac{27}{2} & 36 \end{pmatrix}$$

$$83. A = \begin{pmatrix} 1 & 6 & 5 \\ -5 & 6 & 1 \\ 0 & 7 & 5 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{23}{2} & -\frac{5}{2} & 12 \\ \frac{25}{35} & -\frac{2}{7} & 13 \\ -\frac{2}{35} & \frac{2}{7} & -18 \end{pmatrix}$$

$$84. A = \begin{pmatrix} 1 & 3 & 5 \\ 5 & -2 & 3 \\ 5 & -5 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{17}{2} & -11 & \frac{19}{2} \\ \frac{10}{15} & -13 & \frac{11}{17} \\ -\frac{15}{2} & 10 & -\frac{17}{2} \end{pmatrix}$$

$$85. A = \begin{pmatrix} 1 & 2 & 2 \\ -4 & 7 & -1 \\ 8 & -5 & 6 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{37}{3} & \frac{2}{3} & \frac{16}{3} \\ -\frac{16}{3} & \frac{10}{3} & \frac{3}{7} \\ -\frac{3}{12} & \frac{3}{-7} & \frac{3}{-5} \end{pmatrix}$$

$$86. A = \begin{pmatrix} 6 & 5 & 5 \\ -5 & -1 & 5 \\ 2 & 0 & -3 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{1}{5} & \frac{5}{28} & \frac{10}{55} \\ -\frac{3}{2} & -\frac{3}{10} & -\frac{3}{19} \\ \frac{3}{3} & \frac{3}{3} & \frac{3}{3} \end{pmatrix}$$

$$87. A = \begin{pmatrix} -1 & 9 & 9 \\ 5 & -1 & -5 \\ 9 & 6 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 8 & 18 & -9 \\ -\frac{35}{4} & -\frac{79}{4} & 10 \\ \frac{39}{4} & \frac{87}{4} & -11 \end{pmatrix}$$

$$88. A = \begin{pmatrix} -1 & 1 & 3 \\ -4 & 3 & 6 \\ -1 & 0 & -5 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{15}{2} & -\frac{5}{2} & \frac{3}{2} \\ 13 & -4 & 3 \\ -\frac{3}{2} & \frac{1}{2} & -\frac{1}{2} \end{pmatrix}$$

$$89. A = \begin{pmatrix} 6 & 7 & 1 \\ 8 & -3 & 6 \\ 1 & 7 & -2 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} 12 & -7 & -15 \\ -\frac{22}{3} & \frac{13}{3} & \frac{28}{3} \\ -\frac{3}{59} & \frac{3}{35} & \frac{3}{74} \end{pmatrix}$$

$$90. A = \begin{pmatrix} 8 & 9 & -5 \\ -1 & -2 & 6 \\ 9 & 9 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{28}{55} & -\frac{27}{53} & \frac{22}{43} \\ \frac{2}{9} & \frac{2}{9} & -\frac{2}{7} \\ \frac{2}{2} & \frac{2}{2} & -\frac{2}{2} \end{pmatrix}$$

$$91. A = \begin{pmatrix} -5 & 8 & 1 \\ 6 & -5 & -2 \\ 2 & -1 & -1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{3}{5} & \frac{7}{5} & -\frac{11}{5} \\ \frac{5}{2} & \frac{5}{3} & -\frac{5}{4} \\ \frac{5}{4} & \frac{11}{5} & -\frac{23}{5} \end{pmatrix}$$

$$92. A = \begin{pmatrix} 1 & 2 & 2 \\ -5 & 5 & 8 \\ 9 & 9 & 7 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} \frac{37}{3} & -\frac{4}{3} & -2 \\ -\frac{107}{3} & \frac{11}{3} & 6 \\ \frac{3}{30} & \frac{3}{-3} & -5 \end{pmatrix}$$

$$93. A = \begin{pmatrix} 9 & -2 & 5 \\ 5 & 0 & 2 \\ 2 & -1 & 1 \end{pmatrix}$$

$$\text{Solución: } A^{-1} = \begin{pmatrix} -\frac{2}{5} & \frac{3}{5} & \frac{4}{5} \\ \frac{1}{5} & \frac{1}{5} & -\frac{5}{7} \\ \frac{5}{5} & \frac{5}{5} & -\frac{5}{5} \\ 1 & -1 & -2 \end{pmatrix}$$

$$94. A = \begin{pmatrix} 7 & 5 & 3 \\ 9 & 7 & 5 \\ 8 & 2 & -5 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} \frac{45}{2} & -\frac{31}{5} & -1 \\ -\frac{85}{19} & \frac{59}{13} & 2 \\ \frac{2}{2} & -\frac{5}{5} & -1 \end{pmatrix}$$

$$95. A = \begin{pmatrix} 2 & 2 & 5 \\ -1 & 6 & -2 \\ 3 & -1 & 7 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} -\frac{40}{3} & \frac{19}{3} & \frac{34}{3} \\ \frac{3}{17} & \frac{3}{8} & \frac{3}{14} \\ \frac{3}{3} & -\frac{3}{3} & -\frac{3}{3} \end{pmatrix}$$

$$96. A = \begin{pmatrix} -5 & 7 & 5 \\ 3 & 2 & 7 \\ 1 & 3 & 6 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} -\frac{3}{11} & -\frac{9}{35} & \frac{13}{50} \\ -\frac{3}{7} & -\frac{3}{22} & \frac{3}{31} \\ \frac{3}{3} & \frac{3}{3} & -\frac{3}{3} \end{pmatrix}$$

$$97. A = \begin{pmatrix} -3 & -3 & -3 \\ -1 & -3 & -5 \\ 6 & 2 & -1 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} \frac{13}{6} & -\frac{3}{7} & 1 \\ -\frac{31}{6} & \frac{2}{2} & -2 \\ \frac{6}{3} & -2 & 1 \end{pmatrix}$$

$$98. A = \begin{pmatrix} 1 & 2 & 6 \\ 1 & 9 & -3 \\ 1 & 3 & 4 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} -\frac{9}{7} & -\frac{2}{2} & \frac{12}{9} \\ \frac{6}{5} & \frac{1}{5} & -\frac{7}{7} \\ \frac{6}{5} & \frac{1}{5} & -\frac{7}{5} \end{pmatrix}$$

$$99. A = \begin{pmatrix} 9 & -1 & -1 \\ 8 & -1 & -1 \\ 8 & 1 & 7 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} \frac{1}{32} & -\frac{1}{71} & 0 \\ \frac{3}{8} & -\frac{6}{17} & -\frac{1}{6} \\ -\frac{3}{3} & \frac{6}{6} & \frac{1}{6} \end{pmatrix}$$

$$100. A = \begin{pmatrix} 3 & -1 & -3 \\ -7 & -6 & 11 \\ 5 & 1 & -6 \end{pmatrix} \quad \text{Solución: } A^{-1} = \begin{pmatrix} -\frac{25}{7} & \frac{9}{7} & \frac{29}{7} \\ -\frac{13}{7} & \frac{3}{8} & \frac{12}{7} \\ -\frac{7}{23} & \frac{7}{8} & \frac{25}{7} \\ -\frac{7}{7} & \frac{7}{7} & \frac{7}{7} \end{pmatrix}$$