import numpy as np

1. Create an array of 10 integers and display it.
2. Create a 2D array of shape (3,4) with random integers.
3. Create a 2D array with shape (3,3) with all elements set to 0.
4. Create a 1D array with values ranging from 0 to 9.
5. Create a 1D array with 10 evenly spaced numbers between 0 and 1.
6. Create a 3x3 identity matrix.
7. Create an array of 10 random integers between 1 and 100.
8. Create an array of 10 random floats between 0 and 1.
9. Create an array of 10 random integers between -50 and 50.

10. Create a 2D array with shape (4,5) filled with random integers between -10 and 10.

11. Create an array of 5 numbers and find their sum, mean, and standard deviation.

12. Create a 2D array with shape (3,3) and find the maximum and minimum values in each row.

13. Create a 2D array with shape (4,4) and find the sum of each column.

14. Create a 2D array with shape (4,4) and find the product of each row.

15. Create a 2D array with shape (5,5) and replace all negative values with 0.

16. Create a 2D array with shape (5,5) and replace all values less than 10 with 10.

17. Create a 1D array of 1000 random integers and find the most frequent value.

18. Create a 2D array with shape (3,3) and compute its transpose.
19. Create a 2D array with shape (4,4) and flatten it to a 1D array.
20. Create a 2D array with shape (3,3) and slice the first two rows.

21. Create a 2D array with shape (3,3) and slice the last two columns.

22. Create a 2D array with shape (5,5) and extract a 3x3 subarray from its center.

23. Create a 2D array with shape (4,4) and reverse its rows.

24. Create a 2D array with shape (4,4) and reverse its columns.
25. Create a 2D array with shape (4,4) and sort its rows in ascending order.

26. Create a 2D array with shape (4,4) and sort its columns in descending order.

27. Create a 1D array with values ranging from 0 to 99 and reshape it to a 2D array with shape (10,10).

28. Create a 1D array with values ranging from 0 to 99 and reshape it to a 3D array with shape (3,10,3).

29. Create a 2D array with shape (3,3) and pad it with zeros to create a new array with shape (5,5).

30. Create a 1D array with 10 random integers and replace the first and last values with 0.

31. Create a 1D array with 10 random integers and replace all values greater than 5 with 5.

32. Create a 2D array with shape (4,4) and replace the diagonal values with 0.

33. Create a 1D array with 10 random integers and calculate the cumulative sum.

34. Create a 2D array with shape (3,3) and calculate the cumulative product along each row.

35. Create a 1D array with 10 random floats and round them to the nearest integer.

36. Create a 2D array with shape (4,4) and find the indices of the maximum value in each row.

37. Create a 1D array with 10 random integers and compute the absolute difference between each element and the mean of the array.

38. Create a 2D array with shape (3,3) and compute the dot product of the array with its transpose.

39. Create a 1D array with 10 random integers and compute the variance of the array.

40. Create a 2D array with shape (3,3) and swap its first and last rows.

41. Create a 2D array with shape (3,3) and swap its first and last columns.

42. Create a 1D array with 10 random integers and compute the median of the array.

43. Create a 2D array with shape (3,3) and multiply it by a scalar value of 2.

44. Create a 2D array with shape (4,4) and flatten it to a 1D array, then reshape it back to its original shape.

45. Create a 1D array with 10 random integers and compute the cumulative product.

46. Create a 2D array with shape (3,3) and calculate the determinant of the array.

47. Create a 2D array with shape (4,4) and find the indices of the minimum value in each column.

48. Create a 1D array with 10 random integers and compute the standard deviation of the array.

49. Create a 2D array with shape (3,3) and compute the inverse of the array.

50. Create a 1D array with 10 random integers and compute the mean of the array.