Class Test

Create a 5×5 matrix with values 1,2, 3,….25 and extract the border elements into a 1D array.

Construct a 1D NumPy array of length 100, and replace every 5th element with -1.

Create an array of numbers 1–100 and reshape it into a 10×10 matrix. Then, extract all prime numbers.

Verify the Pythagorean identity: sin²θ + cos²θ = 1 for θ = [0, 30, 45, 60, 90] degrees.

Create a 3×3 matrix with values 1–9 and compute the reciprocal (1/x) of each element.

Extract the first row and last column from a 4×4 matrix.

Create a 5×5 matrix and set the border elements to 1 and inner elements to 0.

Replace all even numbers in an array with -1.

Write a Python function to find the maximum of three numbers.

Write a Python program to find missing numbers from a list.  
Input:[1,2,5,10,11,14,17,20]  
Output: [3,4,6,7,8,9,12,13,15,16,18,19]

Write a Python program to find the product of the units digits in the numbers of a  
given list.  
Input: [12, 23] Output:6