Do the following problems. CHOOSE the correct loop. IT MATTERS (meaning I will penalize you for using the wrong loop).

1. Write code that lets the user enter a number. The number should be multiplied by 10, and the result assigned to a variable called product. Keep multiplying product by 10 until the product is greater than 10,000, printing the product each time.
2. Ask the user to enter two numbers. Add the numbers and display the sum. Ask the user if they want to repeat the operation. If they answer 'yes', repeat, getting two numbers and adding. If 'no', terminate the loop.
3. Write a program that tests each three digit number, and prints out all the numbers that have three digits, that are exactly divisible by 17. You MUST start counting at 100. Test each number one at a time.
    - Achieve this with a WHILE loop that tests every possible number.
    - DO NOT simply add 17 to the first number that YOU know is divisible by 17. The computer has to work this out.
    - FIRST write some pseudocode as comments, THEN write the program. When I run your code, I should see all the numbers that have 3 digits and are divisible by 17.
4. Write a program that asks for the speed of a vehicle in mph, and the number of hours travelled. Use a loop to display the distance the vehicle has travelled for each hour in the time period, using:
    - distance = speed x time
    - As an example:
    - What is the speed? 40
    - How many hours? 3
    - Hour : Distance
    - 1 : 40
    - 2 : 80
    - 3 : 120
5. Write a program that asks the user to enter a series of positive integers. The user should stop the program by entering a negative number. After all the positive numbers have been entered, the program should display their sum. The negative number should NOT be included in the sum.
6. Write a program that predicts the approximate size of a population of organisms. Let the user enter the starting number of organisms, the average daily increase (as a percentage) and the number of days the organisms will be left to multiply. For example, if the user enters values corresponding to:
    - Starting number of organisms: 2
    - Average daily increase: 30%
    - Number of days to multiply: 10
    - Then the program should produce the following display (or similar)

Day : Population

1	2
2	2.6
3	3.38
4	4.394
5	5.7122
6	7.42586
7	9.653619
8	12.5497
9	16.31462
10	21.209

Type up your answers, and submit your .py file through Nexus.