Practice Questions for Python While Loops

Questions with Expected Input and Output

1. Write a program that prints numbers from 1 to 10 using a `while` loop. **Expected Output:** `1 2 3 4 5 6 7 8 9 10`

2. Write a program that prints all even numbers between 1 and 20 using a `while` loop. **Expected Output:** `2 4 6 8 10 12 14 16 18 20`

3. Write a program that prints all the numbers from 10 down to 1 using a `while` loop. **Expected Output:** `10 9 8 7 6 5 4 3 2 1`

4. Write a program that takes an integer input `n` and prints the sum of numbers from 1 to `n` using a `while` loop. **Expected Input:** `n = 5` **Expected Output:** `Sum = 15`

5. Write a program that keeps taking integer inputs from the user until the user enters `0`. Print the sum of all numbers entered. **Expected Input:** `5 10 -3 0` **Expected Output:** `Sum = 12`

6. Write a program that prints the multiplication table of a number entered by the user using a `while` loop. **Expected Input:** `Number = 3` **Expected Output:** `3 x 1 = 3 3 x 2 = 6 3 x 3 = 9 ... up to 3 x 10 = 30`

7. Write a program that takes integer inputs continuously and stops when the user enters a negative number. Print the count of numbers entered. **Expected Input:** `10 20 5 -1` **Expected Output:** `Count = 3`

8. Write a program that calculates the sum of digits of a number entered by the user using a `while` loop. **Expected Input:** `Number = 1234` **Expected Output:** `Sum = 10`

9. Write a program that keeps asking the user to guess a secret number until they guess correctly. **Expected Input:** `Guess = 5, Guess = 3, Guess = 7 (Correct)` **Expected Output:** `Correct! The secret number is 7.`

10. Write a program that prints the first 10 powers of 2 using a `while` loop. **Expected Output:** `1 2 4 8 16 32 64 128 256 512`

11. Write a program that keeps asking the user to input a number and stops if the number entered is divisible by 5. **Expected Input:** `3 8 20` **Expected Output:** `Stopped!  20 is divisible by 5.`

12. Write a program that prints all the letters in the string `"Python"` one at a time using a `while` loop. **Expected Output:** `P y t h o n`

13. Write a program that simulates a countdown timer. Start from 10 and print numbers down to 1, then print `"Liftoff!"`. **Expected Output:** `10 9 8 7 6 5 4 3 2 1 Liftoff!`

14. Write a program that asks the user for a positive integer and keeps halving it until the number is less than 1. Print all intermediate results. **Expected Input:** `Number = 50` **Expected Output:** `50 25 12 6 3 1`

15. Write a program that takes an integer input `n` and prints the square of each number from 1 to `n` using a `while` loop. **Expected Input:** `n = 4` **Expected Output:** `1 4 9 16`