

Python Loops Assignment Answers

Q1. Print Numbers from 1 to 5 Using a While Loop

```
i = 1
while i <= 5:
    print(i)
    i += 1
```

Q2. Calculate the Sum of Numbers from 1 to 10 Using a While Loop

```
i = 1
sum_total = 0
while i <= 10:
    sum_total += i
    i += 1
```

```
print("Sum of numbers from 1 to 10:", sum_total)
```

Q3. Calculate the Factorial of a Number Using a For Loop

```
number = 5
factorial = 1

for i in range(1, number + 1):
    factorial *= i

print(f"Factorial of 5 is {factorial}")
```

Q4. Count the Number of Vowels in a String Using a For Loop

```
text = "Hello, world!"
vowel_count = 0
vowels = "aeiouAEIOU"

for char in text:
    if char in vowels:
        vowel_count += 1

print(f"Number of vowels in the string: {vowel_count}")
```

Q5. Print a Pattern Using Nested Loops

```
rows = 5
```

```
for i in range(1, rows + 1):
    for j in range(i):
        print("*", end="")
    print()
```

Q6. Generate a Multiplication Table Using Nested Loops

```
max_number = 10
for i in range(1, max_number + 1):
    for j in range(1, max_number + 1):
        print(f"{i * j:4}", end=" ")
    print()
```