

Loops in Python (10 Points)

Question 1 (2 points): Given the following code snippet:

```
numbers = [1, 2, 3, 4, 5]

for i in range(len(numbers)):

    print(numbers[i] * 2)
```

What will be the output?

Question 2 (2 points): What is the difference between the while loop and the for loop in Python? Provide an example of when to use one over the other.

Question 3 (2 points): Given the following code snippet:

```
numbers = [1, 2, 3, 4, 5]

result = []

for x in numbers:

    if x % 2 == 0:

        result.append(x)

print(result)
```

What will be the output?

Question 4 (2 points): Write a Python program that uses a while loop to print all the even numbers between 1 and 10 (inclusive).

Question 5 (2 points): Given the following code snippet:

```
fruits = ["apple", "banana", "cherry"]
```

```
for x in fruits:
```

```
    if x == "banana":
```

```
        break
```

```
    print(x)
```

What will be the output?