

Function Practice Worksheet

Task 1

1. Write a function that takes a number as input and returns triple its value.

Example: Double a number

```
def double_number(number):  
    return number * 2
```

Your Task: Modify this to triple the number.

Expected Output:

Example Input: 4

Expected Output: 12

Function Practice Worksheet

Task 2

2. Write a function that takes two numbers as inputs and returns their sum.

Example: Subtract two numbers

```
def subtract_numbers(a, b):  
    return a - b
```

Your Task: Modify this to add two numbers.

Expected Output:

Example Input: 3, 7

Expected Output: 10

Task 3

3. Write a function that takes a number as input and returns its square.

Example: Cube a number

```
def cube_number(number):  
    return number ** 3
```

Your Task: Modify this to return the square of a number.

Expected Output:

Example Input: 5

Expected Output: 25

Task 4

4. Write a function that takes a name as input and returns a personalized greeting. If no name is given, return 'Hello, Stranger!'

Example: Create a farewell message

```
def farewell(name):  
  
    if name.strip() == "":  
  
        return "Goodbye, Stranger!"  
  
    return f"Goodbye, {name}!"
```

Your Task: Create a greeting function instead.

Expected Output:

Example Input: 'Alice'

Expected Output: 'Hello, Alice!'

Example Input: ''

Expected Output: 'Hello, Stranger!'

Task 5

5. Write a function that takes a number as input and returns 'Even' if it's even and 'Odd' if it's odd.

```
def check_even_odd(number):  
  
    if ???:  
  
        return "Even"  
  
    else:  
  
        return "Odd"
```

Expected Output:

Example Input: 6

Expected Output: 'Even'

Example Input: 7

Expected Output: 'Odd'

Task 6

6. Write a function that takes three numbers as inputs and returns the largest one.

```
def find_largest(a, b, c):  
    largest = ???  
  
    return largest
```

Expected Output:

Example Input: 3, 9, 5

Expected Output: 9

Task 7

7. Write a function that takes a word as input and returns it reversed.

```
def reverse_word(word):  
    reversed_word = ???  
    return reversed_word
```

Expected Output:

Example Input: 'hello'

Expected Output: 'olleh'

Task 8

8. Write a function that takes a string as input and returns the number of vowels in it.

```
def count_vowels(word):  
  
    vowels = "aeiou"  
  
    count = 0  
  
    for letter in ???:  
  
        if letter.lower() in ???:  
  
            count += 1  
  
    return count
```

Expected Output:

Example Input: 'programming'

Expected Output: 3

Task 9

9. Write a function that takes a list of numbers as input and returns their sum.

```
def sum_list(numbers):  
  
    total = 0  
  
    for num in ???:  
  
        total += ???  
  
    return total
```

Expected Output:

Example Input: [1, 2, 3, 4]

Expected Output: 10

Task 10

10. Write a function that generates the first 'n' numbers of the Fibonacci sequence.

```
def generate_fibonacci(n):  
    sequence = [0, 1]  
  
    for i in range(2, ???):  
        next_number = ???  
  
        sequence.append(next_number)  
  
    return sequence[:n]
```

Explanation:

The Fibonacci sequence is a series of numbers where:

- The first two numbers are always 0 and 1.
- Each subsequent number is the sum of the two previous numbers.

For example:

- If n = 5, the sequence is [0, 1, 1, 2, 3].
- If n = 7, the sequence is [0, 1, 1, 2, 3, 5, 8].

Your Task:

Write a function that takes a number n as input and returns the first n numbers of the Fibonacci sequence.

Hints:

- Start with [0, 1] as the first two numbers.
- Use a loop to calculate the next numbers in the sequence.
- Stop when you have n numbers.

Expected Output: