

1.Find a digit at a specific place in a number:

```
def digit_at_place(number, place):  
    number_str = str(abs(number)) # Convert the number to a string and handle negatives  
    if place < 1 or place > len(number_str):  
        return "Invalid place"  
    return int(number_str[place - 1])
```

Example usage

```
print(digit_at_place(12345, 3))
```

Expected Output: 3

2. Find the 2nd largest digit in a number:

```
def second_largest_digit(number):  
    unique_digits = sorted(set(int(d) for d in str(abs(number))), reverse=True)  
    if len(unique_digits) < 2:  
        return "No second largest digit"  
    return unique_digits[1]
```

Example usage

```
print(second_largest_digit(12345))
```

Expected Output: 4

3. Find the Exponentiation of a Number:

```
public class Exponentiation {  
    public static double power(double base, int exponent) {  
        return Math.pow(base, exponent);  
    }  
  
    public static void main(String[] args) {
```

```

        double base = 2;

        int exponent = 3;

        System.out.println(power(base, exponent));
    }
}

```

Expected Output: 8.0

4. Area of a triangle when 3 sides are given:

```

public class TriangleArea {

    // Method to calculate the area of a triangle using Heron's formula
    public static double calculateArea(double a, double b, double c) {

        // Calculate the semi-perimeter
        double s = (a + b + c) / 2;

        // Calculate the area using Heron's formula
        double area = Math.sqrt(s * (s - a) * (s - b) * (s - c));

        return area;
    }

    public static void main(String[] args) {

        // Default side lengths
        double a = 3.0;
        double b = 4.0;
        double c = 5.0;

        // Check if the sides form a valid triangle
        if (a + b > c && a + c > b && b + c > a) {

            // Calculate and display the area
            double area = calculateArea(a, b, c);

            System.out.println("The area of the triangle is: " + area);
        } else {

            System.out.println("The given sides do not form a valid triangle.");
        }
    }
}

```

```
    }  
}  
}
```

Expected Output:

The area of the triangle is: 6.0

5. Swap Two Numbers:

```
#include <stdio.h>
```

```
int main() {  
    // Default values  
    int a = 5;  
    int b = 10;  
    int temp;  
  
    // Swapping using a temporary variable  
    temp = a;  
    a = b;  
    b = temp;  
  
    // Output the swapped values  
    printf("After swapping: a = %d, b = %d\n", a, b);  
  
    return 0;  
}
```

Expected Output:

After swapping: a = 10, b = 5

6. Sum of Digits of a Number using Recursion:

```
#include <stdio.h>
```

```
int sum(int num);
```

```
int main() {  
    // Default number  
    int num = 12345;  
    int result;  
  
    result = sum(num);  
    printf("Sum of digits in %d is %d\n", num, result);  
    return 0;  
}
```

```
int sum(int num) {  
    if (num != 0) {  
        return (num % 10 + sum(num / 10));  
    } else {  
        return 0;  
    }  
}
```

Expected Output:

Sum of digits in 12345 is 15