# TUTORIAL 7

**1. Write a function that will read 2 numbers and calculate and display the sum and difference.** #include <stdio.h>

void calculateSumAndDifference() { int num1, num2; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2);

int sum = num1 + num2; int difference = num1 - num2;

printf("Sum: %d\n", sum); printf("Difference: %d\n", difference);

}

int main() { calculateSumAndDifference();

return 0;

}

```

**2. Write a function that accepts 2 numbers as parameters and calculates and displays the sum and difference.**

#include <stdio.h>

void calculateSumAndDifference(int num1, int num2) { int sum = num1 + num2; int difference = num1 - num2;

printf("Sum: %d\n", sum); printf("Difference: %d\n", difference);

}

int main() { int num1, num2; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2);

calculateSumAndDifference(num1, num2);

return 0;

}

```

**3. Write a function that accepts 2 whole numbers as parameters and calculates and returns the product.**

#include <stdio.h>

int calculateProduct(int num1, int num2) { return num1 \* num2;

}

int main() { int num1, num2; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2);

int product = calculateProduct(num1, num2); printf("Product: %d\n", product);

return 0;

}

**4. Write a function that accepts 2 whole numbers as parameters and calculates and returns the quotient.**

#include <stdio.h>

float calculateQuotient(int num1, int num2) {

if (num2 == 0) { printf("Error: Division by zero.\n"); return 0;

}

return (float)num1 / num2;

}

int main() { int num1, num2; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2);

float quotient = calculateQuotient(num1, num2); printf("Quotient: %.2f\n", quotient);

return 0;

}

**5. Write a function to read 2 numbers and display the sum. Call this function from the main function several times.**

#include <stdio.h>

void displaySum() { int num1, num2; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2);

int sum = num1 + num2; printf("Sum: %d\n", sum);

}

int main() {

int i;

for (i = 0; i < 3; i++) { displaySum();

}

return 0;

}

**6. Write a function which accepts 2 integers as parameters and display the sum, difference, and product using a single printf statement.**

#include <stdio.h>

void calculateAndDisplay(int num1, int num2) { int sum = num1 + num2; int difference = num1 - num2; int product = num1 \* num2;

printf("Sum: %d, Difference: %d, Product: %d\n", sum, difference, product);

}

int main() { int num1, num2; printf("Enter two numbers: "); scanf("%d %d", &num1, &num2);

calculateAndDisplay(num1, num2);

return 0;

}

**7. Write a function which accepts an integer and a float value as parameters and returns the product as a double value. Display the result from the main function.**

#include <stdio.h>

double calculateProduct(int num1, float num2) { return num1 \* num2;

}

int main() { int num1; float num2; printf("Enter an integer and a float value: "); scanf("%d %f", &num1, &num2);

double product = calculateProduct(num1, num2); printf("Product: %.2lf\n", product);

return 0;

}

**8. Give the function header for each of the following functions:**

1. **Function `hypotenuse` that takes two double-precision floating-point arguments, `side1` and `side2`, and returns a double-precision floating-point result.**

double hypotenuse(double side1, double side2);

1. **Function `smallest` that takes three integers, `x`, `y`, `z`, and returns an integer.**

int smallest(int x, int y, int z);

1. **Function `instructions` that does not receive any arguments and does not return a value.**

void instructions(void);

1. **Function `intToFloat` that takes an integer argument, `number`, and returns a floating-point result.**

float intToFloat(int number);