Lab 2

Basic commands in C, variable types, arithmetic expressions, conditional if statement, operators and functions.

Read the materials in the posted pdf files for Lab 2 on Delta

To-do list:

1. Write a program that counts the sum, difference, product, and modulo of two integers **(1pt)**
2. Write a program that calculates the product and quotient of real numbers given from the keyboard by the user **(1pt).**
3. Write a program to calculate the volume and total area of a cuboid **(1pt).**
4. Write a program that calculates the density value (f(x)) of the normal distribution at point x, for given parameters μ and σ :

$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{\frac{-(x-\mu)^2}{2\sigma^2}}$$

(**1pt)**

5. Write a program that determines the largest possible number correctly represented by the types short, int and float, for float also the smallest possible number greater than zero
   (2pts).

6. Write a program to check whether a number given from the keyboard is even or odd. **(1pt)**
7. Write a program that calculates, depending on the user's choice, the sum or difference of two numbers. **(1pt)**
8. Write a program to check for two numbers how the percentage of the larger number is the smaller one. E.g. a=2, b=4 result: the number a is 50% of the number b. **(2pt)**
9. Write a program that calculates, depending on the user's choice, the area of a circle, triangle or square for the given required parameters. **(2pt)**
10. Verify that the given point with x and y coordinates given from the keyboard lies between the functions y=log(x)+10, y=1.5^x, y=exp(x). **(2pt)**
11. Write a program that solves a system of equations with two unknowns using the determinant method. **(2pt)** Description of the algorithm: https://philschatz.com/algebra-intermediate-book/contents/m63334.html