**Control Test 1**

**Description of the data**

The Excel file *control-1.xlsx* contains a table describing the growth of five plants. For each day, written as 1, …, 20, the size of the plant in centimeters is written in the cell.

**1) Statistics**

Plot a line graph using the columns **A, B, C, D, E and F.**

Write the summarizing statistics of plant sizes for each day, on the right size of the table:

- The minimum size, using the **МИН** function in the column **G**

- The maximum size, using the **МАКС** function in the column **H**

- The average size, using the **СРЗНАЧ** function in the column **I**

- The standard deviation of sizes, using the **СТАНДОТКЛОН** function in the column **J**

**2) Correlation**

Calculate the correlation between the days variable (on column **A**) and the size for each plan, using the **КОРРЕЛ** function. Write it below the table, in the line **22**.

**3) Regression**

Plot a dot XY graph using the columns **A** and **I**.

Using the variable X as the days, in the column **A**, and the variable Y as the average size, in the column **I**. Fill the table on the right side, in column M, between lines **4 and 8**. Use the functions **СРЗНАЧ, СТАНДОТКЛОН and КОРРЕЛ.**

Write Alpha as **Correlation XY \* Standard Deviation Y / Standard Deviation X** in column **L**.

Write Beta as **Average Y – Alpha \* Average X** in column **M**.

Write Result as **Alpha \* X + Beta**, for every day, in the column **O**.

Plot a dot XY graph using the columns **A** and **O**.