**Task 1. Statistical functions**

>>> go to sheet f_statystyczne. Fill in the missing formulas

1.a. Insert functions to calculate the selected statistical data

**How to do it:**

Find in statistical functions, correlation coefficient
Task 3. Creating a forecast based on the trend function

>>> go to sheet trend Fill in the missing formulas

2. The sales volume of cars in the showroom in Siedlce in recent quarters was presented below:

<p>| | | | | | | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>105</td>
<td>109</td>
<td>115</td>
<td>118</td>
<td>120</td>
<td>121</td>
<td>123</td>
<td>124</td>
<td>125</td>
<td>126</td>
</tr>
</tbody>
</table>

Assuming that the factors affecting the sale will not change, appoint a sales forecast for the next 3 quarters.

How to do it:

- Based on the data from the "trend" spreadsheet make a scatter plot.
- Since there is a trend and random fluctuation in the series, it can be used the function of the trend to forecast.
- Right-click on a point of the graph and select Add trendline. Select options to view the graph of the equation and to display $R^2$ value.

$R^2$ value inform us if the model fit to the data - the closer to 1, the stronger the fit.
Change the type of function to get the most value of $R^2$.

Use the equation from the graph to calculate the projected sales value.

1. Drag the formula on forecast quarters
2. In a similar way do the forecast using other trend model (another function) with the highest value of $R^2$
3. On the basis of the mean square error rate, Which model is better to predict the studied phenomenon?

**Task 4. Financial function**

>>> go to sheet f_finansowe. Fill in the missing formulas

1. For the years 2014-2016 the company made an investment for the new production line that will bring revenues from 2016 until 2030. Enter the formulas for calculating
   - the net present value of the investment (NPV)
   - The internal rate of return (IRR)

**Zad. 5. Scenarios**

>>> go to sheet scenariusze Fill in the missing formulas

In the worksheet, create four scenarios according to the table below
How to do it:
Scenarios is nothing like talking about it, "what would happen if ...". In order to perform a task, click the Data tab, then the simulation analysis and from the list select Scenario Manager.

Next in the window Scenario Manager choose the Add button to create a new scenario.
In the appearing dialog box, **add scenario** must fill in the fields specified in the specific values and click **OK**.

In the **scenario values** box, complement data in accordance with the first variant of values.

For the next scenarios repeat this sequence of operations.