Exercise 14/11/18

Redone 19/11/18

Let’s elaborate the data about sight testing we performed in some schools. We want to collect some useful info about the children.

The stereo tests are: LANG I, TNO, WEISS, STEREOACUITY

# Using editing e formatting

GOAL: have all the data in one worksheet in one excel file

USE: cut and paste, unite cells, split cells and so on. Use formatting

* Using cut and paste put all the data in one worksheet in a new excel file.
* Merge all the data and add as first column the name of the original worksheet
* Add some colors to the sheet (borders, background)

# Adding new column using functions and convert text to table

GOAL: we want to add new data for every row (children)

USE: text functions – IF, logical functions (AND OR …)

* Sometimes the text contains a mix between numbers and text. Use text function to split numbers from text

1. Compute the age in months for every child
2. Compute the value for the TNO test (first number of the cell), e.g. “60 2 su 2” -> 60

* Use logical function to extract some info about each child:

1. Is the child female and with glasses?
2. Does the child fail LANG 1 AND TNO?
3. Does the child fail at least one test?

* Some data must be corrected:

1. The TNO VALUE must me increased by a value estimated around 30% (this value, 30%, must be memorized in a cell at the end of the worksheet)

imagine new questions …

# Add filtering and ordering

GOAL: The data can be filtered and ordered.

USE: sort & filter

1. Add filtering an ordering – merge all the headers in ONE ROW
2. Who is the oldest/youngest child?

# Extracting summarized info about the data

GOAL: we want to extract some data in general about the population

USE: COUNT, COUNT IF … AVERAGE, MEAN. Use data computed in step 2.

1. How many children fail at least one test?
2. How many children wear glasses?
3. How many girls wear glasses
4. Average age
5. Minimum, max and average of the TNO test

* … new data

# use VLOOKUP

GOAL: we want to add some data that would be difficult to add by using IF

1. Compute the cover index according to the following table:

|  |  |
| --- | --- |
|  |  |
| No | -1 |
| Exo | 1 |
| Orto | 0 |

# use goal seek

Search the value of a parameter that realizes a goal

1. I want to cover the costs of the screening which is 200 euros and I want to impose a basic cost X for each test. However, children under 8y must pay only half of X and children with glasses can take the test for free. How much should be X?

# use pivot table

GOAL: we want to summarize the data about children

1. how many students for each class
2. how many fail for each test
3. what is the average TNO score for class?
4. how many students fail a given test for class

* ….