

Data Analysis Using Spreadsheets - Part 1 (Worksheet: 100 Points)

Write your answer along with each question and save your file

Name: _____

1. Open Cities.csv file in MS Excel.

Task # 1: How many cities information does the file contain? [10 points]

2. Inserting and deleting rows

Insert then delete: Palo Alto, USA, 37.44, 122.14, 14.75

3. Inserting columns

- Add Fahrenheit column to Left of temperature (position your cursor at temperature and then press Insert and then columns.)

Formulas

$$=(f2 * 9/5) + 32$$

The first two cells should be

$$7.52 = 45.54$$

$$8.1 = 46.58$$

Copy-paste to more cells.

- Task # 2: Create a Column named Celsius with formula $=(e2 - 32) * 5/9$ [25 points]

4. Deleting columns

Delete Fahrenheit and Celsius columns

5. Sorting

- Select temperature column, Data-> A-Z, expand selection, undo
- Select entire sheet, Data-> sort ->, by temperature, then by country + latitude descending

6. Filtering

- Select entire sheet, Data -> Sort & Filter -> Advanced
To filter by condition: temperature greater than 10, then country contains "ia", set the following criteria in G1 to K2

City	Country	Latitude	Longitude	temperature
= "*ia*"				>10

- Undo the above step
- Task # 3: Filter all the records where the country starts with N. [25 points]
- Undo the above step

7. Aggregation

- Average temperature =average(e2:e11), then =average(e2:e214), then =average(e:e)
- Maximum latitude, minimum longitude =max(c:c), =min(d:d)
- Number of longitudes less than 0 =countif(d:d,"<0")
- Task # 4: How many cities with temperature > 10? [25 points]

8. Grouped aggregation

- Average temperature for cities with latitude > 60
=averageif(c:c,">60",e:e)
- Average temperature for cities with latitude < 60
=averageif(c:c,"<60",e:e)
- Task # 5: What is the average latitude for cities with temperature < 10. [15 points]