PART 1 - ANALYSIS

- **What trends do you see in the data?**

  The most obvious trend that we perceived is the trend of exponential growth of the population number.

- **Analyze how big the differences between various estimates are. Do you see a trend, i.e., do the differences become smaller or larger over time?**

  From the year zero the difference is about 1-10 million, from 0 until 1950 the differences are about 100-300 million and after 1950 the differences are also about 100 – 400 million. The difference is viewable in the exponential population increase.

- **Think about these differences relative to the estimates at the respective time points and in absolute terms. When are the uncertainties the largest in absolute, when in relative terms?**

1400	1500	1600	1700	1800	1900	2000
13,3%	16,2%	14,8%	12,5%	9,6%	9,2%	1,5%

Relative uncertainty by year.

  In absolute terms the uncertainty is the highest in 1900. The uncertainty is at this point approximately 150 million. In relative terms the uncertainty is, in regards with the table above, the highest in 1500.

- **Do you think you can faithfully represent the uncertainty and the data in the same plot? Why, or why not?**

  Yes, the population data and uncertainty can be represented in the same plot, because you could draw a bar or line graph with error bars around each data point to represent the uncertainty of the estimates. Also the relative uncertainty could be plotted given the numbers are multiplied by 10.000, thus representing the data per 10.000 people.

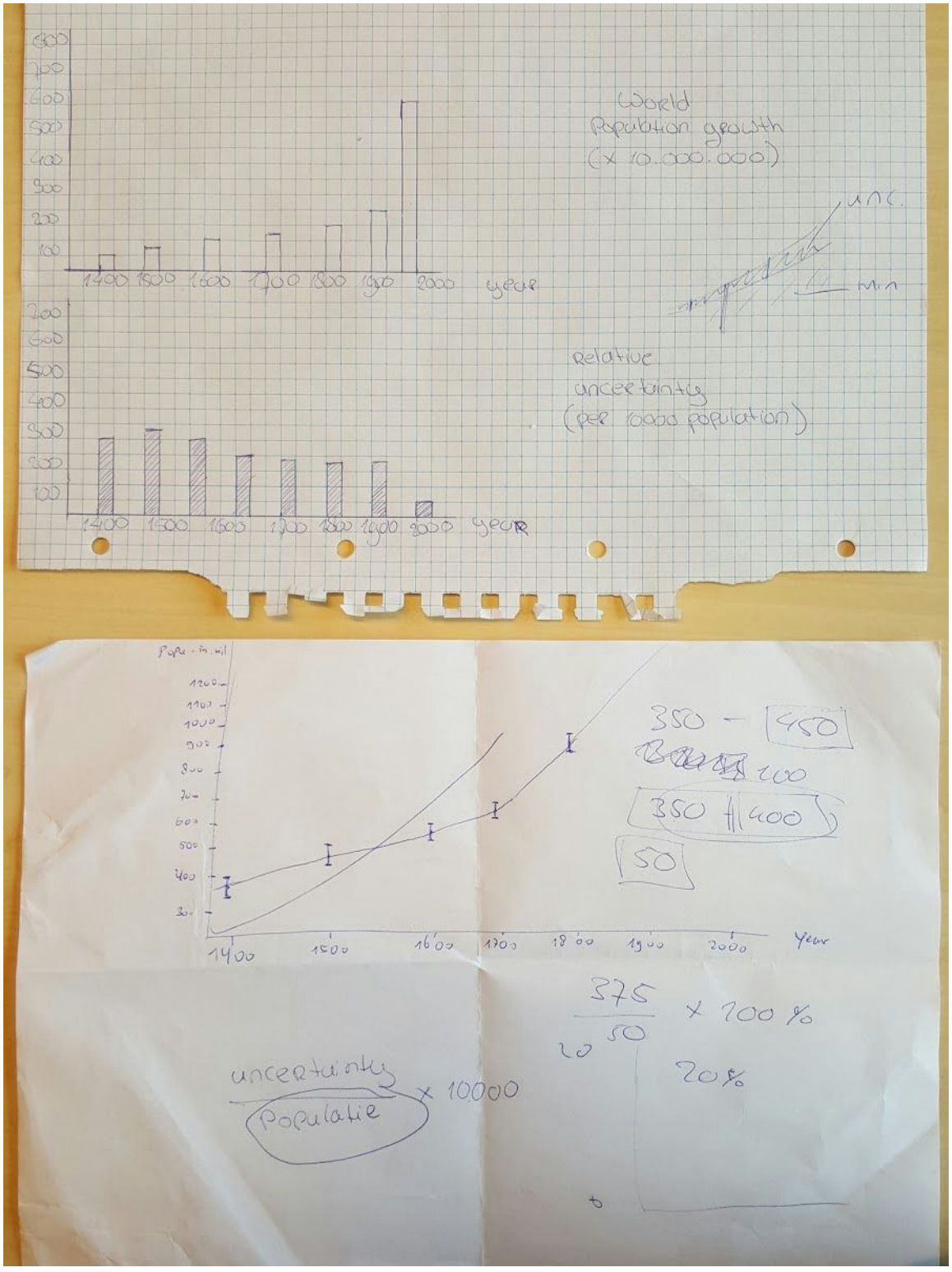
- **What effect do you think will the linear interpolation have on the uncertainty?**

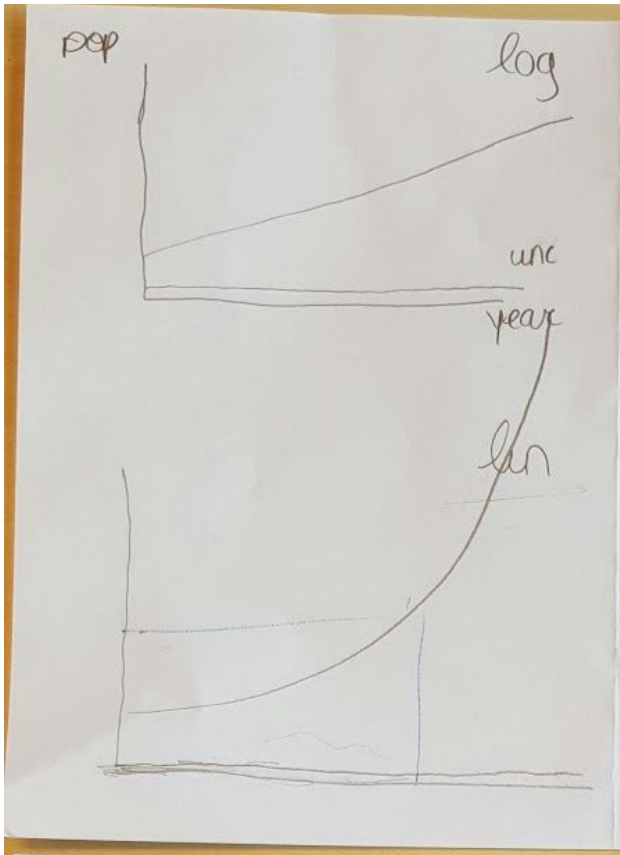
Looking at the table the absolute value might (slightly) increase, depending on the world population, while the relative value will decrease. The decreasing trend is noticeable in the percentage of the uncertainty over the years.

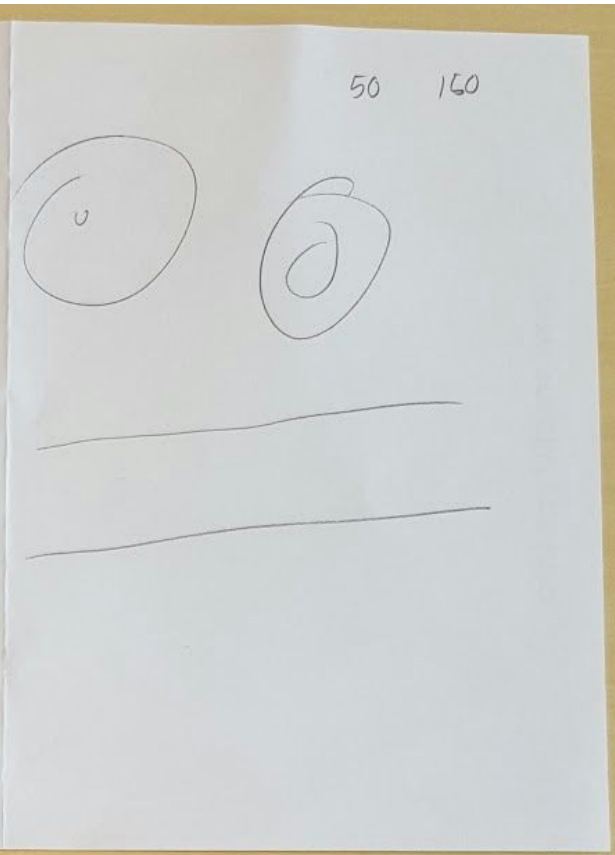
- **Is linear interpolation a suitable method for this data?**

  The method is not suitable because of the following:
  - *Firstly, the growth of the population is exponential, so linear interpolation is not a suitable method.*
  - *Secondly, the uncertainty does not have a direct correlation with the growth of the population. So the appliance of any form of interpolation would not result in representable data.*

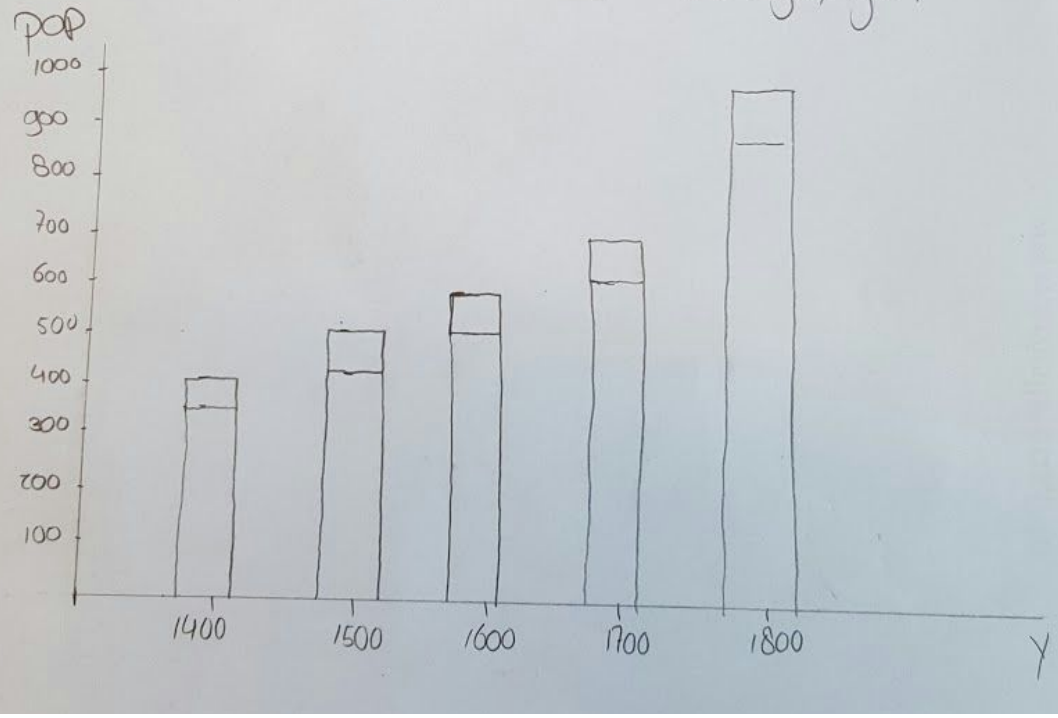
PART 2 - SKETCHING







(350,50) (425,75) (500,80) (600,80) (800,90)



PART 3 - Group Reflection