A group of Denver eye specialists wants to estimate the proportion of children in the US population that are afflicted with myopia. (Note that, for this study a child was defined to be anyone under the age of 12.) Based on Denver county birth records the group obtains a random sample of 500 names of people born within the last 12 years. Of these 500, only 430 could be found and, of those, 125 had evidence of myopia.

1) What is the parameter of interest?
   The parameter of interest is always a numerical value that characterizes the target population. It's the number we want to estimate. In this case we want to estimate the proportion of the population of US children that are afflicted with myopia.

2) What is the variable of interest?
   The variable of interest is the information we collect about an experimental unit. In this study we're collecting information about the presence or absence of myopia.

3) Describe the variable type.
   The variable is qualitative. Recall that qualitative variables are also known as categorical variables.

4) Define the target population.
   The target population is: all US children

5) Define the sampled population.
   The sampled population is: all children born in the county of Denver

6) Are the target and sampled population the same?
   The target and sampled populations are not the same

7) Do you feel that the inferences drawn from this sample can be confidently applied to the target population? Why or why not?
   You can have whatever you want here. Just be sure you're able to defend it!

8) Compute the point estimate for the proportion of U.S. children that have myopia.
   \[ \hat{p} = \frac{125}{430} = 0.291 \]

9) Is this an example of census data or sample data? (Why?)
   This is an example of sample data because we did not get a measure for all children in the whole country.