

- 1.3:** (a): The cases are the 143,196 births.  
 (b): For each birth, various concentrations and the gestation period were recorded — all continuous variables.  
 (c): Is there an association between pollution levels and gestation period?
- 1.4:** (a): The 600 asthma patients.  
 (b): The research group (treatment or control), quality of life, activity, asthma symptoms, and medication reduction on a scale from 0 to 10 — all categorical variables.  
 You might think the scores from 0 to 10 should be numerical, but those scales are loose. Someone with a score of 8 in quality of life does not have twice the quality of life as someone with a score of 4.  
 (c): Does the Buteyko method cause health benefits for asthma patients?
- 1.5:** (a): The 160 children.  
 (b): The variables are (1) research group (told to be honest or not told), (2) gender, (3) age, (4) child's claim (white or black), and (5) whether the child is an only child. The types are all categorical except for age, which is a continuous variable.  
 (c): Which children (by gender, age, and only childness) when told to be honest shift their rate of lying? Is the rate of lying associated with a child's age, sex, only-childness, or being told to be honest?

- 1.6:** (a): The 129 undergraduates.

(b):

variable	type
money	categorical
education	categorical
job respectedness	categorical
number candies taken	discrete

- (c): Is perception of status associated with willingness to take (and report) candies from children?

- 1.7:** (a): There are 150 cases.  
 (b): There are 4 continuous numerical variables: sepal length, sepal width, petal length, and petal width.  
 (c): There is one categorical variable - the species. The levels are setosa, versicolor, and virginica.

- 1.8:** (a): Each row represents a UK resident.  
 (b): There are 1691 participants in the survey.

(c):

variable	type
sex	categorical
age	numerical, continuous?
marital	categorical
grossIncome	categorical, ordinal
smoke	categorical
amtWeekends	numerical, discrete
amtWeekdays	numerical, discrete