

Practice: Hypotheses and Sources of Data

- What is the opposite of each hypothesis?
 - The masses of tomatoes grown in sunny conditions are greater than the masses of tomatoes grown in shady conditions.
 - Most students would prefer to wear a school uniform.
 - As the amount of training increases, the behaviour of pet dogs improves.
 - As the weather gets warmer, fewer people go ice-skating.
 - People who use Brand X toothpaste will have fewer cavities.
 - Listening to music with a fast beat will increase the listener's heart rate.
- Make a hypothesis about how the variables in each pair are related.
 - number of sports people play and level of fitness
 - price of a movie and box office sales
 - temperature and number of people outdoors
 - distance from school and mode of transit
- State the opposite of each hypothesis in question 2.
- Is each source of data primary or secondary? How do you know?
 - Janet called 12 grocery stores to see which stores carry a certain brand of cereal she likes.
 - Don used data from the Bank of Canada to find out how the rate of inflation changed last year.
 - Carly measured and recorded the high and low temperatures each day for one month.
- Which sources of data are primary and which are secondary?
 - Joaquim used data from Environment Canada to find the mean number of hours of sunshine each month last year.
 - Tran asked the first 50 people in line for tickets which movie they planned to see.
 - Bozena used archived newspaper advertisements to find out how the price of milk has changed.
- Would you use data from a primary source or a secondary source to answer each question? Explain.
 - What is the average height of students at your school?
 - Have birth weights of babies born in Canada increased in the last 10 years?
 - What mass of wheat is grown in Saskatchewan each year?
- Make a hypothesis about the extra-curricular activities of students in your class. How would you test your hypothesis?