

Answers:

1.
 - a) Most people's favourite number is not 7.
 - b) Adults do not spend more time listening to classical music than rap. (Alternative: Adults spend either less time or as much time listening to classical music as they spend listening to rap.)
 - c) In Ontario, the number of teenagers who join hockey teams is greater than or equal to the number who join soccer teams.
 - d) Chocolate is the most popular flavour of ice cream.
2. Answers will vary. Examples:
 - a) Hypothesis: Time spent doing homework increases as a student's age increases. Opposite: Time spent doing homework does not increase as a student's age increases.
 - b) Hypothesis: Children tend to grow to the same height as their mothers. Opposite: Children do not tend to grow to the same height as their mothers.
 - c) Hypothesis: As temperature increases, the crime rate also increases. Opposite: As temperature increases, the crime rate decreases or remains constant.
 - d) Hypothesis: As the cost of gasoline increases, the number of people using public transit increases. Opposite: As the cost of gasoline increases, the number of people using public transit decreases or stays the same.
3.
 - a) Primary; the office manager gathers the data.
 - b) Secondary; the student uses data gathered by Statistics Canada.
 - c) Primary; the researcher gathers the data.
 - d) Secondary; the researcher uses data gathered by the transit authority.
4. Answers about advantages will vary.
 - a) Primary; data are up-to-date
 - b) Secondary; Internet search is fast and easy
 - c) Primary; getting opinions from customers
 - d) Primary; data are up-to-date
5. Answers will vary. Examples:
 - a) Most students in the class prefer dogs as pets.
 - b) Survey the class. Primary data are best since the population is small and secondary data may not be available.
6.
 - a) Primary; Steve gathered the data himself.
 - b) Answers will vary. Examples: Brown-eyed students are shorter. Blue is the least common eye colour.
 - c) Survey a larger sample.
7. Answers will vary. Examples:
 - a) Females make more phone calls than males.
 - b) Survey 50 females and 50 males.
 - c) Look for data on the Internet or in publications.
 - d) Secondary sources using larger samples are more likely to be accurate.
8. Answers will vary. Examples:
 - a) Taller people perform better at the high jump.
 - b) Heights of the athletes and how high the athletes can jump; primary data for the school team would be easy to collect, but secondary sources could give a larger sample and more accurate results.