

Chapter 3 Literacy

Part A

Use the terms to answer or complete each sentence. Terms may be used more than once.

accurate	E-STAT.	ordered pairs
algebraic model	ethics	outlier
answering	extrapolate	primary data
bias	fair	purpose
cause and effect	fit	rating scale
categorical variable	honest	scatter plot
coefficient of determination	influential point	secondary data
completion	horizontal	sign
correlation coefficient	linear regression	strength
dichotomous	multiple choice	the same
dot plot	non-linear	two variables
	open-ended	variable

1. The _____ is a measure of how certain you can be in making predictions from a graph or model.
2. The _____ can be used to determine how well the regression equation fits the set of data.
3. Data that is generated by the researcher through experiments or observational studies.

4. In a survey, _____ questions involve a limited number of predefined answers.
5. Linear correlation is a measure of the _____ of the relationship between two variables.
6. Two-variable data sets can be graphed using a _____.
7. The three principles of proper surveying include _____ in surveying, design for _____ responses, and eliminate _____.
8. An extreme value in a set of data. _____
9. In a survey, _____ questions refer to two-part classification questions.



Name: _____ Date: _____

10. A statistical attribute that can be measured or counted. _____
11. When designing a survey, instructions for _____ the survey should be provided.
12. Errors in analysis can occur when the effects of an _____ or an _____ are not considered.
13. A statistical graph similar to a scatter plot. _____
14. A variable whose attribute is a category rather than a numeric value. _____
15. The _____ of r relates to the slope of the line not the fit.
16. When collecting data in an experiment, all participants should have _____ conditions.
17. The closer the value of r is to +1 or -1, the closer the _____.
18. A correlation coefficient of 0 means the line of best fit is _____.
19. A database of Canadian statistics that can be accessed by students. _____
20. You can use _____ to determine an equation of the line of best fit of a set of two-variable data.
21. A data point with extreme values that greatly affects the slope of the regression line.

22. Survey questions where respondents fill in the blanks or answer with a single response are also known as _____ questions.
23. Two-variable data sets can be identified by two column tables of values and _____.
24. When designing a survey, the _____ of the survey should be stated.
25. An unwanted influence on a sample that prevents it from being representative of a population.

26. Errors in analysis can occur if a linear regression is used for a _____ relation.



Name: _____ Date: _____

27. In a _____ relationship, a change in the independent variable has a predictable effect on the dependent variable.
28. Data that is made available by others. _____
29. A correlation coefficient of 0 means that no relationship exists between the _____.
30. To ensure data collected in an experiment is _____ and _____, it is important to plan and set up the experiment in advance.
31. In a survey, _____ questions refer to questions with values on a scale.
32. A survey respondent can answer freely when answering _____ questions.
33. Regression can be used to determine an _____ for a relationship in a data set.
34. If you _____ outside the range of the data set, errors in data analysis can occur.

Part B

Determine if each statement is true or false. If false, explain why.

1. Height and number of televisions in a household are examples of a variable in statistics.

2. A high correlation for a data set always indicates a cause and effect relationship between the two variables. _____
3. A random sampling technique should be used to select participants when collecting data in an experiment. _____
4. Bi-weekly means twice a week. _____
5. An outlier follows the pattern of the other values in the data set. _____
6. Errors in analysis can occur if there is too little data. _____
7. Bias is not caused by the wording of survey questions. _____



Name: _____

Date: _____

8. Some two-variable data sets have a relationship between the variables.

9. For one-variable data sets, you know two attributes about each subject.

10. An influential point reduces the coefficient of determination r^2 .

11. When doing secondary research, it is important to keep track of all sources.

12. A dot plot is used to display two-variable data. _____
13. Bias can be caused by an unrepresentative sample. _____
14. The correlation coefficient indicates whether there is a direct relationship between the variables.

15. For two-variable data sets, you know two attributes about each subject.

16. When designing a survey, it is important to ask for personal information.

17. The closer the correlation coefficient is to 0, the better the fit. _____
18. It is generally better to use secondary data, when possible. _____
19. Data sets can have varying degrees of linear correlation. _____
20. When designing a survey, it is important to ask questions that are not easily answered.



Chapter 3 Literacy Answers

Part A

1. coefficient of determination
2. correlation coefficient
3. primary data
4. multiple choice
5. strength
6. scatter plot
7. ethics, honest, bias
8. outlier
9. dichotomous
10. variable
11. answering
12. outlier, influential point
13. dot plot
14. categorical variable
15. sign
16. same
17. fit
18. horizontal
19. E-STAT
20. linear regression
21. influential point
22. completion
23. ordered pairs
24. purpose
25. bias
26. non-linear
27. cause and effect
28. secondary data
29. two variables
30. accurate, fair
31. rating scale
32. open-ended
33. algebraic model
34. extrapolate

Part B

1. True
2. False. A high correlation for a data set indicates a possible a cause and effect relationship between the two variables.
3. True
4. False. Bi-weekly means every two weeks.
5. False. An outlier does not follow the pattern of the other values in the data set.
6. True
7. False. Bias is caused by the wording of survey questions.
8. True
9. False. For one-variable data sets, you know one attribute about each subject.
10. False. An influential point increases the coefficient of determination r^2 .
11. True
12. False. A dot plot used to display one-variable data.
13. True
14. False. The correlation coefficient indicates whether there is a cause and effect relationship between the variables.
15. True
16. False. Surveys should not ask for personal information.
17. False. The closer the correlation coefficient is to 1 or -1, the better the fit.
18. False. Primary data is better.
19. True
20. False. Survey questions should be easy to answer.

