1. A _____ describes how the dependent variable depends on the independent variable.
   A)   model
   B)   relation
   C)   function
   D)   percentage

2. When considering height and age, height is the dependent variable because height depends upon age.
   A)   True
   B)   False

3. The percentage _____ in a function is the percentage increase in the function from one value of the independent variable to another.
   A)   rise
   B)   decline
   C)   relation
   D)   change

4. The average growth rate of a function over an interval is the change in the function divided by the change in the:
   A)   dependent variable
   B)   independent variable
   C)   percent increase
   D)   percent decrease

5. _____ is the process of estimating unknown values between known data points using the average growth rate.
   A)   Relation change
   B)   Interpolation
   C)   Extrapolation
   D)   Absolute change

6. _____ is the process of estimating unknown values beyond known data points using the average growth rate.
   A) Relation change
   B) Interpolation
   C) Extrapolation
   D) Absolute change

7. Percentage change can provide information that may not be readily apparent from the raw data.
   A) True
   B) False

8. The following table shows the world population (in billions) on the given date:

Date	1950	1960	1970	1980	1990	2000
Population	2.56	3.04	3.71	4.45	5.26	6.08

   What is the dependent variable?
   A) Date
   B) Population
   C) Percent change
   D) Average growth rate

9. The following table shows the world population (in billions) on the given date:

Date	1950	1960	1970	1980	1990	2000
Population	2.56	3.04	3.71	4.45	5.26	6.08

   What is the percent change from 1960 to 1970?
   A) 6.7%
   B) 19%
   C) 22%
   D) 25%

10. The following table shows the world population (in billions) on the given date:

Date	1950	1960	1970	1980	1990	2000
Population	2.56	3.04	3.71	4.45	5.26	6.08

Calculate the average growth rate (in millions) from 1990 to 2000.
A) 820 million people per year
B) 82 million people per year
C) 8.2 million people per year
D) 0.82 million people per year

11. The following table shows the number of customer complaints against a U.S. car rental company during the given year:

Date	2002	2004	2006	2008	2010
Number of complaints	1123	1304	1487	1398	1651

What is the percent change from 2004 to 2006?
A) 12%
B) 14%
C) 16%
D) 18%

12. The following table from the World Health Organization shows the cumulative number of Severe Acute Respiratory Syndrome (SARS) cases reported on certain dates in March and April 2003:

Date	March 26	March 31	April 5	April 10	April 15
Number of cases	1323	1622	2416	2781	3235

What was the percent change from April 5 to April 10?
A) 13.1%
B) 14.1%
C) 15.1%
D) 16.1%

13. In 1949, the inflation rate in the United States was negative, and the value was –2%. If a car cost $1500 at the beginning of the year, what did it cost at the end of the year?
A) $1200
B) $1470
C) $1497
D) $1350

14. The amount of tax you owe is a function of your taxable income, with taxable income being the:
    A) dependent variable
    B) independent variable
    C) percent change
    D) interpolation

15. The following table shows the percentage of children in the United States between the ages of 3 and 5 who are enrolled in public and nonpublic nursery school and kindergarten programs:

Date	1970	1975	1980	1985	1990	1995	2000
Percentage	37.5	48.6	52.5	54.6	59.4	61.8	64.0

Use interpolation to estimate the percentage of children enrolled in 1987.

16. A _____ is a graph consisting of isolated points, with each dot corresponding to a data point.
    A) bar graph
    B) line graph
    C) scatterplot
    D) pie chart

17. Scatterplots can be used to represent large numbers of data points that cannot be reasonably displayed using a bar graph.
    A) True
    B) False

18. To make a _____, we begin with a scatterplot and join the adjacent points with straight line segments.
    A) line graph
    B) bar chart
    C) pie chart
    D) smoothed line graph

19. An increasing line graph indicates a _____ growth rate.
    A) stable
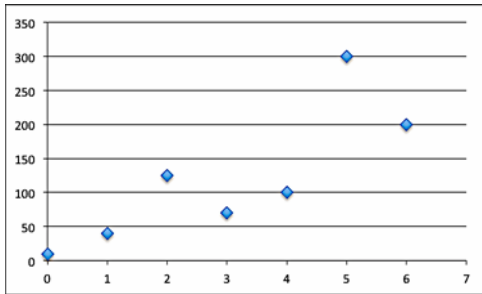   B) positive
    C) negative
    D) neutral

20. A smoothed line graph is made from a _____ by joining data points smoothly with curves instead of line segments.
    A) line graph
    B) bar graph
    C) scatterplot
    D) pie chart

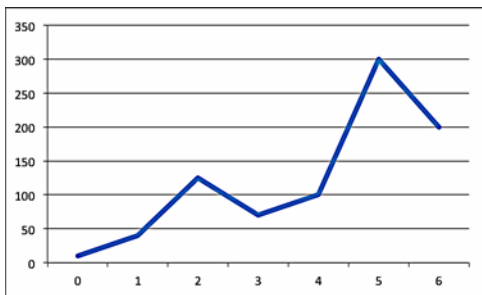21. A smoothed line graph may be appropriate when the growth rate is continuous.
    A) True
    B) False

22. The figure below is an example of what type of graph?
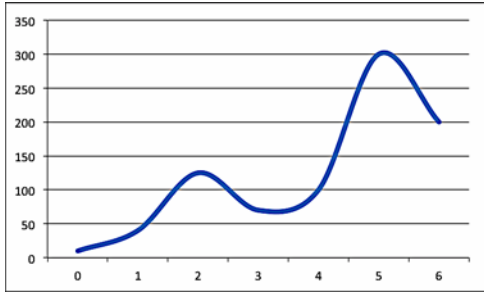

    A) Line graph
    B) Scatterplot
    C) Smoothed line graph
    D) Bar graph

23. The figure below is an example of what type of graph?

    A) Line graph
    B) Scatterplot
    C) Smoothed line graph
    D) Bar graph

24. The figure below is an example of what type of graph?

A) Line graph
B) Scatterplot
C) Smoothed line graph
D) Bar graph

25. In cleaning toxic waste sites, typically the amount of waste eliminated decreases over time. That is, the amount of toxic waste remaining as a function of time is decreasing at a decreasing rate. What would a graph of this function look like?
A) It would be decreasing, becoming more steep over time
B) It would be increasing, becoming more steep over time
C) It would be increasing, becoming less steep over time
D) It would be decreasing, becoming less steep over time

Answer Key

1. C
2. A
3. D
4. B
5. B
6. C
7. A
8. B
9. C
10. B
11. B
12. C
13. B
14. B
15. 56.5%
16. C
17. A
18. A
19. B
20. C
21. A
22. B
23. A
24. C
25. D