Exploratory Data Analysis

Started on	Saturday, May 30, 2020, 5:17 PM
State	Finished
Completed on	Saturday, May 30, 2020, 5:25 PM
Time taken	8 mins 14 secs
Grade	**100** out of 100

Question 1

Correct

10 points out of 10

What is the definition of the sample variance?

Select one:

- a. the average squared difference between each observation and the mean ✔
- b. the difference between the largest and the smallest value
- c. the spread of the middle 50% of the observations in a data set
- d. a measure of the average distance between each observation and the mean

Question 2

Correct

10 points out of 10

You have a two-level nominal variable, **Outcome**, and a four-level nominal variable, **Method**. Which graph should you use to visualize the relationship between **Outcome** and **Method**?

Select one:

- a. mosaic plot ✔
- b. bubble plot
- c. comparative box plot
- d. scatterplot

Question 3

Correct

10 points out of 10

Match the value to the symbol.

σ	population standard deviation	✔
σ^2	population variance	✔
s	sample standard deviation	✔
μ	population mean	✔

Question 4

Correct

10 points out of 10

Which of the following is a best practice for customizing visualizations?

Select one:

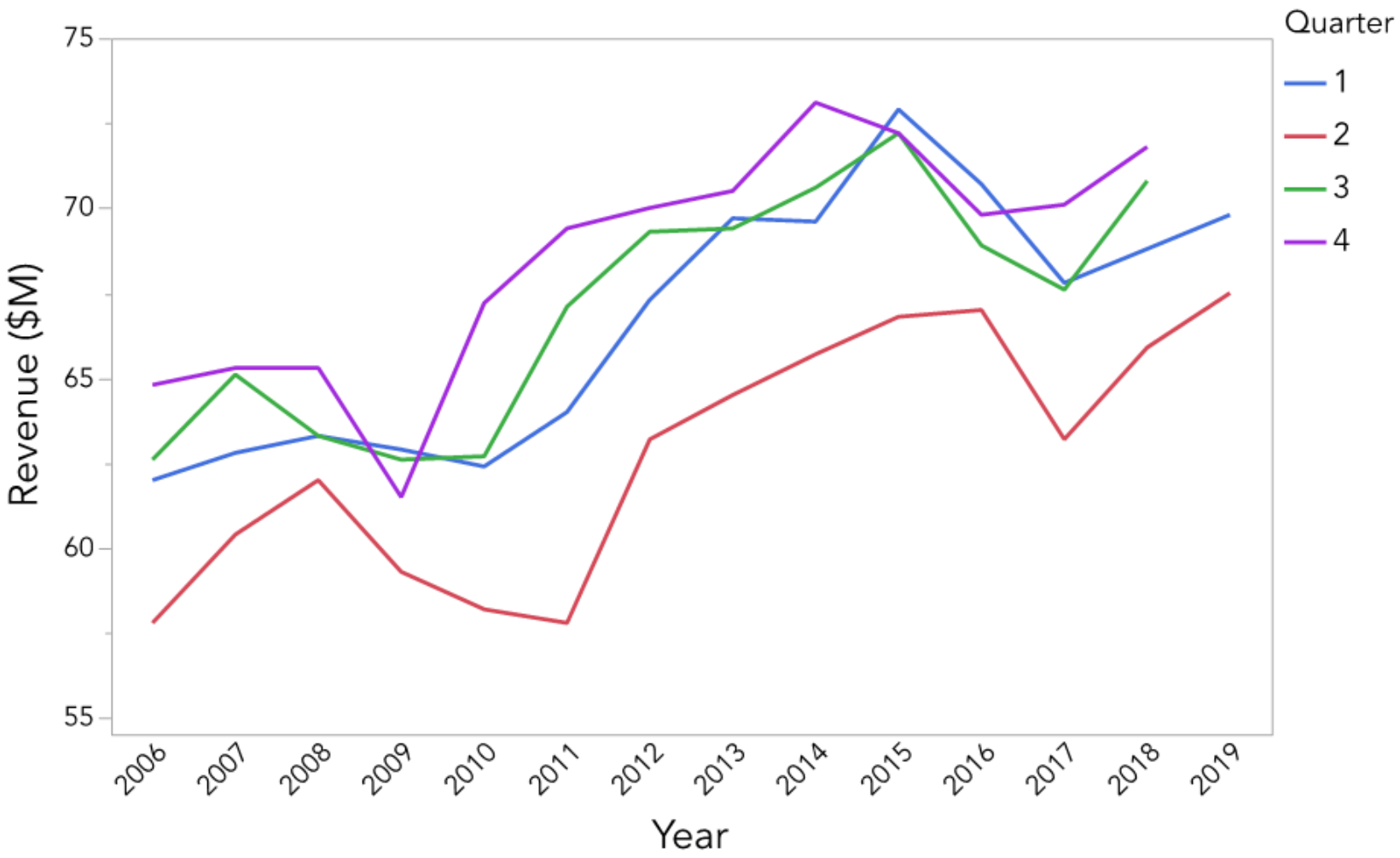
- a. Always use the default graph settings provided by the software.
- b. Use exploding pie charts and 3-D bar charts to help tell your story.
- c. Use clip art and special fonts to make the graph look more professional.
- d. Use legends and change the markers to better communicate your message. ✔

Question **5**

Correct

10 points out of 10

What do you learn from this graph?



Select one:

- a. Every year, the revenues in the fourth quarter are the highest.
- b. For any given year, the second quarter has the lowest revenue. ✔
- c. The overall revenue from 2006 to 2019 has not changed.
- d. The revenue has steadily increased from one year to the next.

Question **6**

Correct

10 points out of 10

You have production data for two years in a table with a code for the product name. Another table has the product description and the code for the product name. What should you do to add the product descriptions to the production data?

Select one:

- a. Join the two tables. ✔
- b. Stack the data.
- c. Transpose the data.
- d. Concatenate the two tables.

Question **7**

Correct

10 points out of 10

An analyst has determined that a distribution is right skewed. Which kind of graph would tell this story?

Select one:

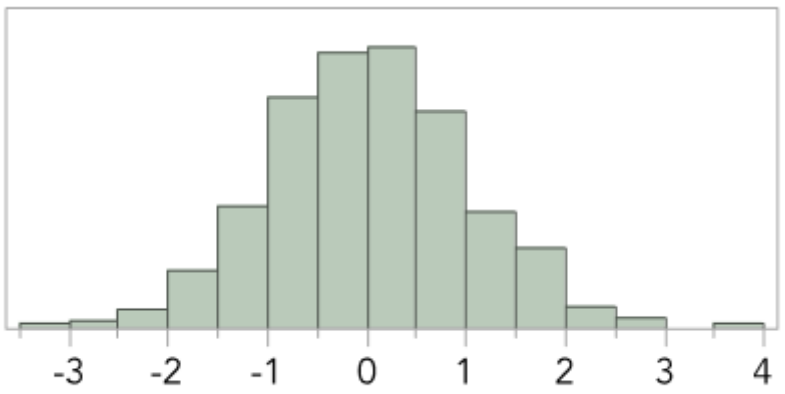
- a. scatterplot
- b. bar chart
- c. histogram ✔
- d. Pareto plot

Question 8

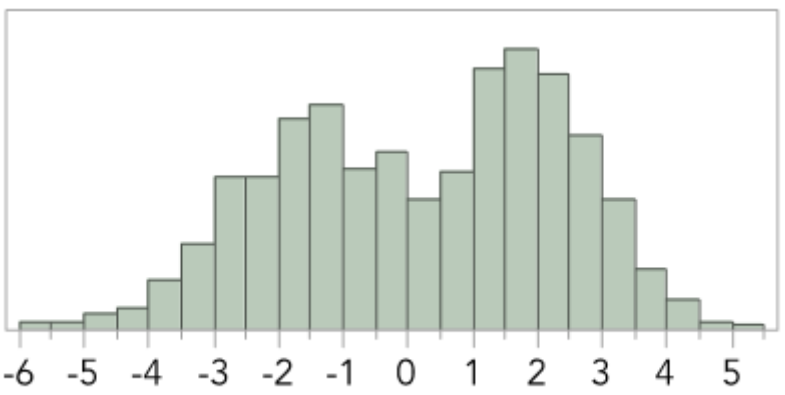
Correct

10 points out of 10

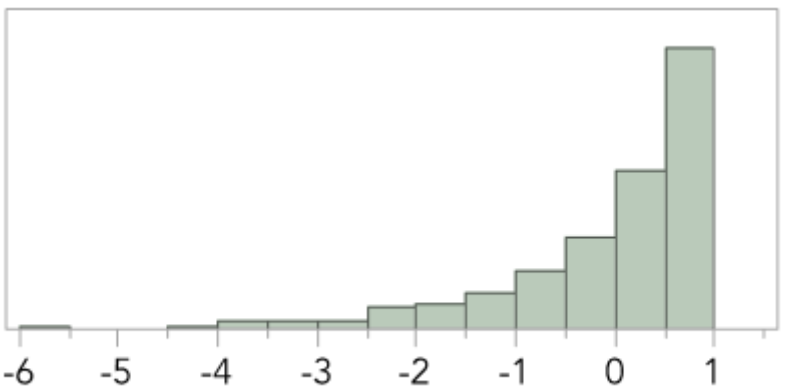
Match the description of the distribution shape to the correct graph.



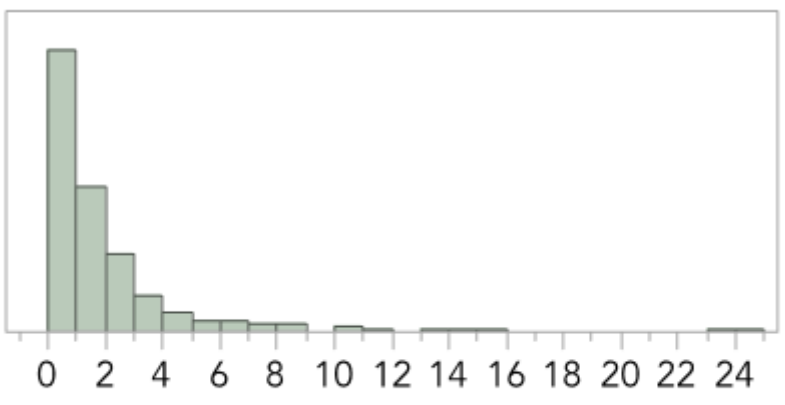
normal ✔



bimodal ✔



left-skewed ✔



right-skewed ✔

Question 9

Correct

10 points out of 10

You are studying the variation in parts produced using different machines. You collect data for 100 parts. The variables are **Machine Number** and **Part Size**. Which modeling types are correct for these two variables?

Select one:

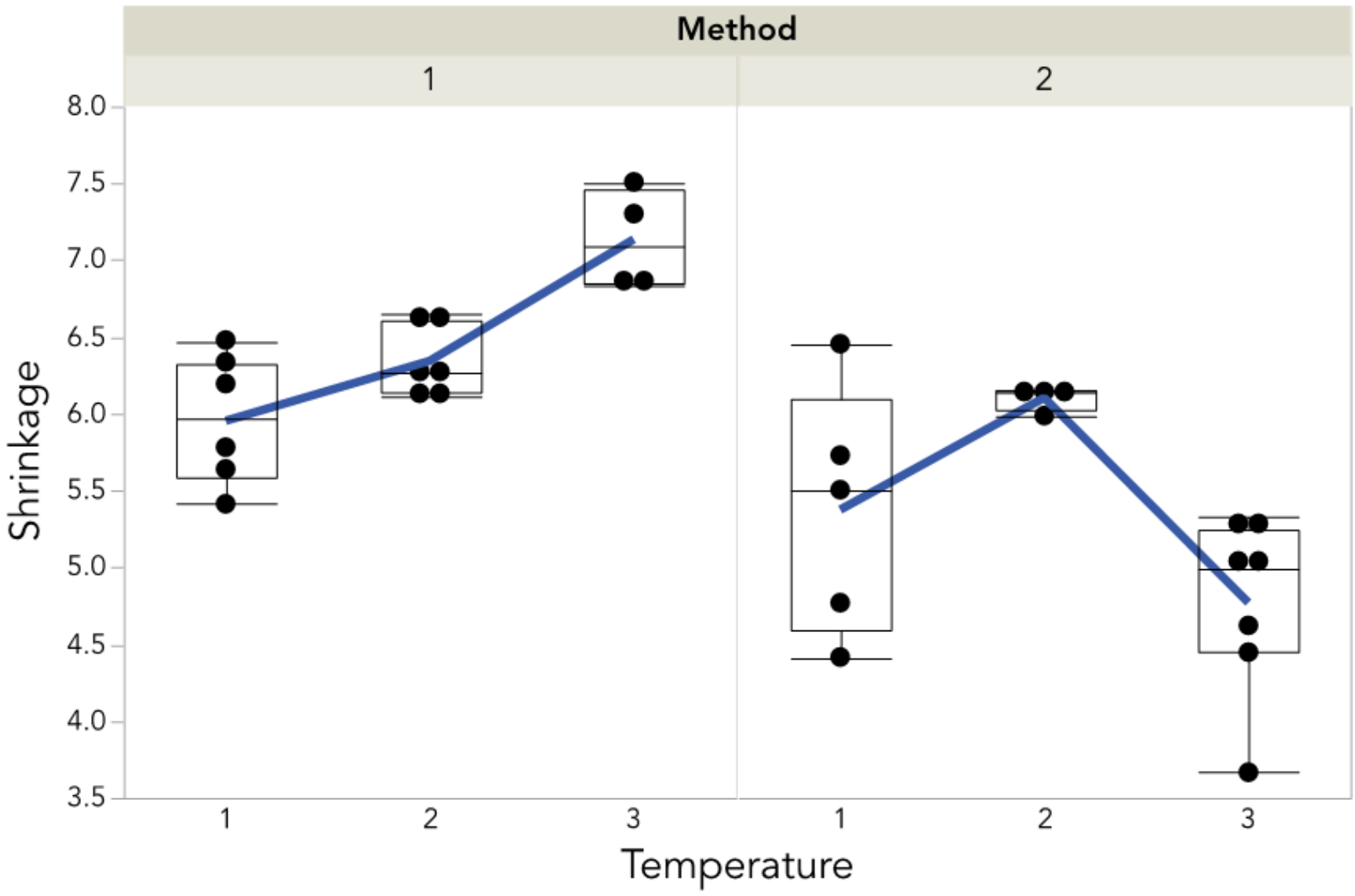
- a. **Machine Number** is nominal and **Part Size** is continuous. ✔
- b. **Machine Number** is continuous and **Part Size** is continuous.
- c. **Machine Number** is continuous and **Part Size** is ordinal

Question **10**

Correct

10 points out of 10

You are studying shrinkage for extruded parts using two methods run at three temperatures. Lower shrinkage is better. What do you learn from this graph?



Select one:

- a. The shrinkage for the two methods is the same.
- b. The shrinkage for the three temperatures is the same.
- c. Temperature 3 has the highest shrinkage, and temperature 1 has the lowest.
- d. The shrinkage for each method depends on the temperature. ✔