**Frage 1:**  
Which command displays the plot?

A. plt.display()  
B. plt.show()  
C. show.plot()  
D. plt.plot()

**Frage 2:**  
What is the purpose of plt.plot(x, y)?

A. Create a pie chart  
B. Create a line plot  
C. Create a scatter plot  
D. Create a bar chart

**Frage 3:**  
Which function adds a title to a plot?

A. plt.set\_title()  
B. plt.heading()  
C. plt.title()  
D. plot.title()

**Frage 4:**  
What does the following code do?

python

CopyEdit

plt.xlabel("Year")

plt.ylabel("Population")

A. Adds a color bar  
B. Sets the axis scales  
C. Adds axis labels  
D. Adds legends

**Frage 5:**  
Which plot type would be most appropriate to show population vs. time?

A. Bar chart  
B. Line plot  
C. Pie chart  
D. Heatmap

**Frage 6:**  
What happens if you don’t call plt.show() in a script?

A. Plot saves automatically  
B. Plot may not display  
C. Error occurs  
D. Plot shows twice

**Frage 7:**  
Which keyword adjusts the size of the figure?

A. plt.size()  
B. figsize=(x, y) in plt.figure()  
C. resize()  
D. plt.layout(x, y)

**Frage 8:**  
Which command makes a scatter plot?

A. plt.scatter(x, y)  
B. plt.plot(x, y)  
C. plt.bar(x, y)  
D. plt.pie(x)

### Fancy Visualization (Seaborn, Plotly)

**Frage 9:**  
Which library is best known for interactive plots?

A. matplotlib  
B. seaborn  
C. plotly  
D. pandas

**Frage 10:**  
What is Seaborn built on top of?

A. Plotly  
B. NumPy  
C. Matplotlib  
D. Pyplot

**Frage 11:**  
Which function from seaborn creates a histogram?

A. sns.hist()  
B. sns.histplot()  
C. sns.barplot()  
D. sns.lineplot()

**Frage 12:**  
What type of data is best visualized with sns.boxplot()?

A. Distribution of a variable across categories  
B. Correlation between two variables  
C. Pie chart of groups  
D. 3D surfaces

**Frage 13:**  
Which plot type shows correlation strength visually?

A. Line plot  
B. Histogram  
C. Heatmap  
D. Pie chart

**Frage 14:**  
What is the purpose of plotly.express.scatter()?

A. To create animated scatter plots  
B. To filter data  
C. To load CSV files  
D. To add legends

**Frage 15:**  
How can you show Plotly figures in a Jupyter notebook?

A. plt.show()  
B. display()  
C. The figure shows automatically  
D. Use .show() on the figure

**Frage 1:**  
**Answer:** B. plt.show()  
**Explanation:** plt.show() displays the plot window. Without it, the plot may not appear in some environments.

**Frage 2:**  
**Answer:** B. Create a line plot  
**Explanation:** plt.plot(x, y) creates a basic 2D line plot in matplotlib.

**Frage 3:**  
**Answer:** C. plt.title()  
**Explanation:** This function adds a title to the current plot.

**Frage 4:**  
**Answer:** C. Adds axis labels  
**Explanation:** plt.xlabel() and plt.ylabel() set the x and y axis labels.

**Frage 5:**  
**Answer:** B. Line plot  
**Explanation:** Line plots are best for showing trends over time.

**Frage 6:**  
**Answer:** B. Plot may not display  
**Explanation:** Without plt.show(), the plot might not render, especially outside notebooks.

**Frage 7:**  
**Answer:** B. figsize=(x, y) in plt.figure()  
**Explanation:** You use figsize=(width, height) in plt.figure() to control figure dimensions.

**Frage 8:**  
**Answer:** A. plt.scatter(x, y)  
**Explanation:** This function creates a scatter plot in matplotlib.

**Frage 9:**  
**Answer:** C. plotly  
**Explanation:** Plotly is known for creating highly interactive and web-ready plots.

**Frage 10:**  
**Answer:** C. Matplotlib  
**Explanation:** Seaborn is a high-level interface built on top of matplotlib for better aesthetics.

**Frage 11:**  
**Answer:** B. sns.histplot()  
**Explanation:** This function is used in seaborn to plot histograms.

**Frage 12:**  
**Answer:** A. Distribution of a variable across categories  
**Explanation:** Boxplots are used to display spread, median, and outliers for variables by category.

**Frage 13:**  
**Answer:** C. Heatmap  
**Explanation:** Heatmaps use color intensities to represent correlation or values in a matrix.

**Frage 14:**  
**Answer:** A. To create animated scatter plots  
**Explanation:** Plotly Express supports animations and interactivity in scatter plots.

**Frage 15:**  
**Answer:** D. Use .show() on the figure  
**Explanation:** Plotly figures use .show() to render in notebooks or browsers.