## **Weekly challenge 1**

A data analyst working for an e-commerce website creates the following data visualization to show the amount of time users spend on the site:

Chart

Description automatically generated

What type of visualization is it?

Correlation chart

**Histogram**

Scatter plot

Line graph

**Correct**

It is a histogram. Histograms demonstrate how often data values fall into certain ranges.

**2.**Question 2

A data analyst notices that two variables in their data seem to rise and fall at the same time. They recognize that these variables are related somehow. What is this an example of?

Visualization

**Correlation**

Causation

Tabulation

**Correct**

When a data analyst notices that two variables rise and fall at the same time, this is an example of correlation. Correlation is the measure of the degree to which two variables change in relationship to each other.

**3.**Question 3

Fill in the blank: A data analyst creates a presentation for stakeholders. They include \_\_\_\_\_ visualizations because they want them to be interactive and automatically change over time.

geometric

static

**dynamic**

aesthetic

**Correct**

They include dynamic visualizations. Dynamic visualizations are interactive and can automatically change over time.

**4.**Question 4

Sophisticated use of contrast helps separate the most important data from the rest using the visual context that our brains naturally respond to.

**True**

False

**Incorrect**

Review [the video about the elements of effective visualization](https://www.coursera.org/learn/visualize-data/lecture/pzUSm/data-visualization-impact) for a refresher.

**5.**Question 5

A data analyst makes sure that they approach problems in a user-centric way. What element of data analytics does this describe?

Design thinking

Critical thinking

Analytical thinking

Structured thinking

**Correct**

Design thinking is a process used to solve complex problems in a user-centric way.

**6.**Question 6

Fill in the blank: During the \_\_\_\_\_ phase of the design process, you start to generate data visualization ideas.

**ideate**

define

test

empathize

**Correct**

There are five phases of the design process: empathize, define, ideate, prototype, and test. During the ideate phase of the design process, you start to generate data visualization ideas.

**7.**Question 7

A data analyst adds labels to their line graph to make it easier to read even though they already have a legend on their visualizations. How does labeling the data make it more accessible?

**Labeling doesn’t depend on interpreting colors**

Labeling helps redirect focus from outliers

Labeling creates more visual interest

Labelling adds contrast to a visualization

**Correct**

Labeling data directly instead of relying on legends that require color interpretation can make data visualizations more accessible. This also makes them faster to read.

**8.**Question 8

Distinguishing elements of your data visualizations makes the content easier to see. This can help make them more accessible for audience members with visual impairments. What is a method data analysts use to distinguish elements?

**Separate the foreground and background**

Ensure all elements are highlighted equally

Use contrasting colors and shapes

Add a legend

**Correct**

Data analysts distinguish elements of data visualizations by separating the foreground and background and using contrasting colors and shapes.