# Q4

**Due** Oct 24 at 11:59pm **Points** 1 **Questions** 10
**Available** Oct 21 at 2:50pm - Oct 24 at 11:59pm **Time Limit** 20 Minutes

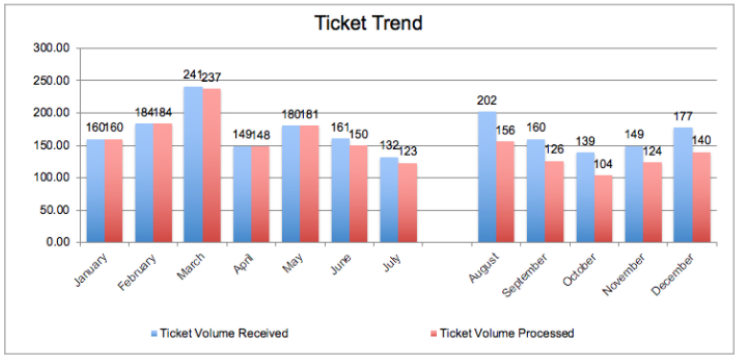
# Instructions

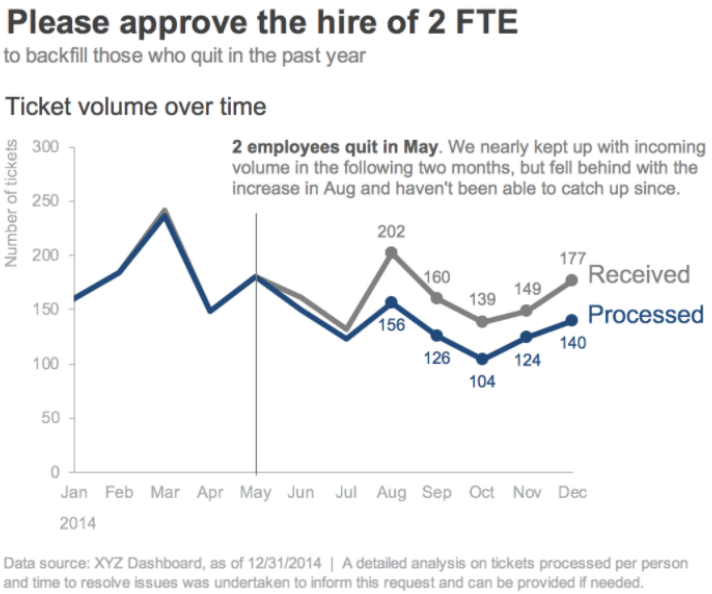
This quiz covers material from: **week 4**

Reminders:

- There are 10 questions.
- You have only one attempt.
- You have 20 minutes.
- All lecture quizzes must be completed by Friday of the following week.

Note: The image below is used for a question in this quiz. If you cannot see the image below please use a different browser to take this quiz:




## Attempt History

| | Attempt | Time | Score |
|---|---|---|---|
| **LATEST** | Attempt 1 | 11 minutes | 1 out of 1 |

ⓘ Correct answers are hidden.

Score for this quiz: **1** out of 1
Submitted Oct 21 at 7:51pm
This attempt took 11 minutes.

## Question 1

**0.1 / 0.1 pts**

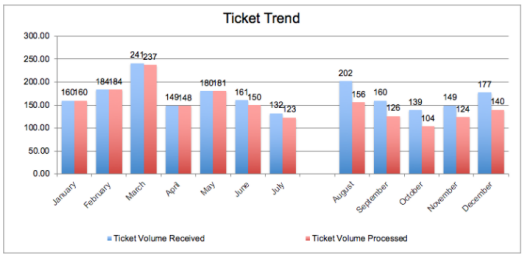
A descriptive analysis is one that tests a statistical hypothesis (such as a t-test)

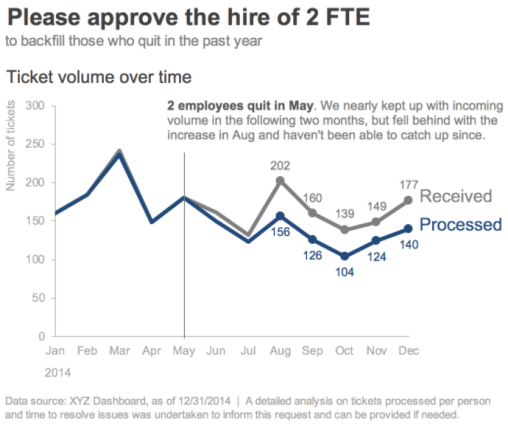
- ○ True
- ◉ False

## Question 2

**0.1 / 0.1 pts**

The following two visualizations plot the same information. The plot on the right is a better visualization than that on the left. Select all of the following characteristics of the plot on the right that make it a better visualization than the visualization on the left.



- [ ] A bar chart is used, which is the right type of plot for displaying trends over time.
- [x] A line plot is used, which is the right type of plot for displaying trends over time.
- [x] An informative title is included.
- [x] Data are annotated directly, making it clear which line is which.
- [x] The source of the data are included.

## Question 3

**0.1 / 0.1 pts**

Pie charts are typically not the right type of plot for visualizing information because...

- ( ) pie charts can only be used to display continuous data.
- ( ) pie charts are inaccurate displays of information.
- ( ) pie charts only allow for display of a single color for each slice of the pie.
- (•) it's easier to visually discern differences using the height of bar charts than it is to discern the difference in size of a pie chart.

## Question 4

**0.1 / 0.1 pts**

Please match the seaborn function with the kind of data visualization you use it for

| | |
|---|---|
| **sns.histplot()** | To see the distribution |
| **sns.lineplot()** | To see the change in a |
| **sns.scatterplot()** | To see the relationship |
| **sns.boxplot()** | To see how grouping l |

## Question 5

**0.1 / 0.1 pts**

What do measures of central tendency tell you about a variable?

- ○ the maximum value across observations
- ○ the minimum value across observations
- ○ the variance in the values across the observations
- ○ the range of the values across the observations
- ◉ the "typical" value across observations

## Question 6

**0.1 / 0.1 pts**

To avoid the issues encountered with the data collected from the class on the Fermi Estimation task, what could I have done when setting the survey to make it less work for myself when cleaning the data?

- (●) required responses to only be numeric
- ( ) limited who responded
- ( ) only accepted correct responses
- ( ) opened the survey up to more people

## Question 7

**0.1 / 0.1 pts**

A number of `standardize_` functions were used in the Descriptive Analysis notes. Which of the following best describes what they accomplished?

- ( ) Clean up responses from Fermi survey so that all responses were categorical and could be used to calculate the mode across responses.
- (●) Clean up responses from Fermi survey so that all responses were numeric and could be used to calculate the median across responses.
- ( ) Add variability to the responses from the Fermi survey.
- ( ) Remove incorrect responses from students on the Fermi survey.

## Question 8

**0.1 / 0.1 pts**

Descriptive and Exploratory data analyses accomplish which of the following? (Check all that apply.)

- [x] understand relationships between variables
- [x] understand size of dataset
- [x] understand distribution/shape of individual variables
- [ ] generate predictive models
- [ ] establish causality between two variables

## Question 9

**0.1 / 0.1 pts**

By definition, two different datasets with the same mean will also have the same standard deviation.

- ( ) True
- (•) False

## Question 10

**0.1 / 0.1 pts**

Clean data is the same thing as tidy data

- ( ) True

- False

Quiz Score: **1** out of 1