

Quiz 4: Exploratory Data Analysis

LATEST SUBMISSION GRADE

90%

1. To complete this quiz, you will first need to import the data in "StormEvents_2014.csv" you downloaded in Module 1. Using an import file or the Import Tool, import the data. Make sure to include the following columns:

1 / 1 point

- State, Month, Event_Type, Begin_Date_Time, End_Date_Time, Injuries_Direct, Property_Cost, Crop_Cost, Begin_Lat, Begin_Lon, End_Lat, End_Lon
- Verify the data type is correctly set for each variable.

How many unique types of events occurred? In other words, how many categories are there in Event_Type?

48

✓ **Correct**
Correct!

2. What is the Event_Type of the longest lasting event?

1 / 1 point

Calculate the duration of each event as the difference between End_Date_Time and Begin_Date_Time.

Drought

✓ **Correct**
Correct!

3. In which state did flooding cause the highest total damage cost? Include all types of flooding included in the data set.

1 / 1 point

Michigan

✓ **Correct**
Correct!

4. Which state had the most lightning events during the summer months?

1 / 1 point

Consider June, July, and August as the summer months.

Florida

✓ **Correct**
Correct!

5. Which event type results in the highest total number of direct injuries?

1 / 1 point

Winter Weather

✓ **Correct**
Correct!

6. Which event type has the highest **rate** of direct injuries? Here rate refers to the direct injuries per event for each type. Does the result surprise you? Think about what else you might do if you're trying to find the most dangerous type of event.

1 / 1 point

Sneakerwave

✓ **Correct**

Correct!

7. Assume a vector named events contains only integer values. Which code below returns the logical index identifying all values within the range of [5 8] in the vector "events"?

1 / 1 point

- ☒ events > 4 & events <= 8
- ☐ events == 5 | events == 8
- ☐ events < 8
- ☐ events > 5 | events < 8

✓ **Correct**

Correct!

8. Which line of code creates the logical index to select all events in Kansas that caused more than \$10,000 in property damage excluding tornado events?

0 / 1 point

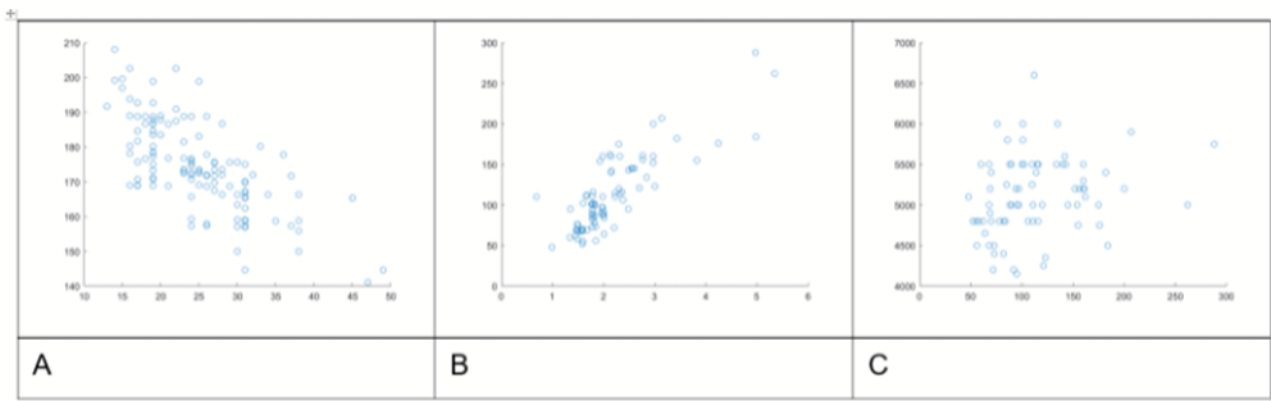
- ☐ ind = StormEventsData.State=="KANSAS" & StormEventsData.Property_Cost>10000 - StormEventsData.Event_Type=="Tornado";
- ☐ ind = StormEventsData.State=="KANSAS" & StormEventsData.Property_Cost>10000 & StormEventsData.Event_Type~="Tornado";
- ☒ ind = StormEventsData.State=="KANSAS" | StormEventsData.Property_Cost>10000 | StormEventsData.Event_Type~="Tornado";
- ☐ StormEventsData.State=="KANSAS" + StormEventsData.Property_Cost>10000 - StormEventsData.Event_Type~="Tornado";

✗ **Incorrect**

Use AND (&) to create a logical index where all conditions apply to the results.

9. Match each image to the correct statement. Each image can only be used once.

1 / 1 point



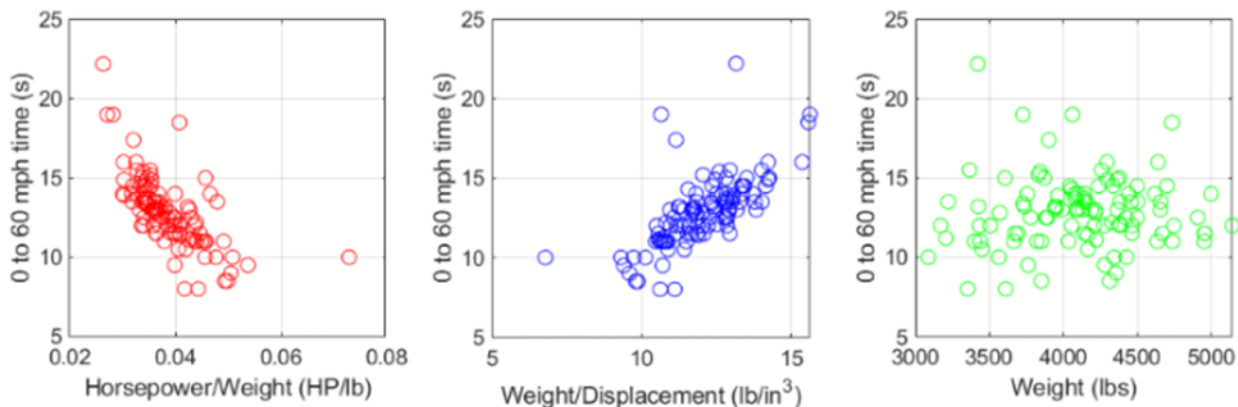
- ☒ A: Negative Correlation, B: Positive Correlation, C: Weak/No Correlation
- ☐ A: Weak/No Correlation, B: Positive Correlation, C: Negative Correlation
- ☐ A: Positive Correlation, B: Negative Correlation, C: Weak/No Correlation

✓ Correct

10. Earlier in this module you looked at 8 cylinder automobiles from the 70's and 80's and found the following correlation coefficients:

1 / 1 point

- 0.67 for Acceleration and **Horsepower/Weight**
- +0.68 for Acceleration and **Weight/Displacement**
- +0.055 for Acceleration and **Weight**



Which of the above quantities is a good predictor of Acceleration?

- ☐ Horsepower/Weight
- ☐ Weight/Displacement
- ☐ Weight
- ☐ None of the quantities can be used to predict Acceleration
- ☒ 1) and 2) are nearly equal given the strength of the correlation coefficient.

✓ Correct

Correct! The magnitude of the correlation coefficient important for determining if two quantities are correlated, not the sign of the coefficient.