



<u>Course</u> > <u>Multiple Choice Questions</u> > <u>Assessment Questions</u> > Assessment

Assessment

Download the CSV file (from the previous lesson) and import the file into Excel. This is the data set that you will use to answer each multiple choice question in this assessment. Each row in the data set represents a building that was damaged by an earthquake in the Himalayas. The amount of damage is given in the variable "damage grade." A full list of variables and their meanings can be found in the previous lesson in the Code Book. We recommend that students download the data set and import into Excel prior to starting the multiple choice assessment. Choose the best answer from the answers provided to the questions.

Good Luck!

Multiple Choice Assessment

Question 1

1.0/1.0 point (graded)

Imagine that this dataset consisted of two data tables that you needed to join in order to do the analysis. One data table had information on the "damage_grade" for each building. The other data table had all the other information on each building. Which join should you perform to ensure you keep all rows from both files?

O Left join, using 'key' of damage_grade
O Right join, using 'key' of building_id
● Full join, using 'key' of building_id ✓
O Full join, using 'key' of damage_grade
Submit You have used 1 of 1 attempt
Question 2
1.0/1.0 point (graded) A damage grade of 2 represents a medium amount of damage. A team seeking to improve the region's safety wants to know how many buildings had this level of damage. What percent of buildings have a grade of 2?
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1.0/1.0 point (graded)

The same team is wanting to describe the level of damage sustained in the region. They next need to know what the most common level of damage was. What was the most common damage grade?

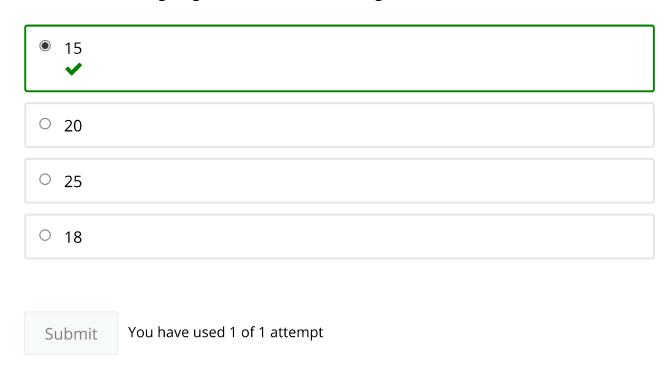
O 0
O 1
● 2✓
O 3
Submit You have used 1 of 1 attempt
Question 4 1.0/1.0 point (graded) The next objective is to assess the role of building age in safety. The variable "age" is the age of the building, in years. What is the average (mean) building age?
● 25.39 ✔
O 14.12
O 40.55
O 18.74

You have used 1 of 1 attempt

Question 5

1.0/1.0 point (graded)

The distribution of age is not symmetrical, meaning that the median may be a better indicator of 'average' age. What is the median age?



Question 6

1.0/1.0 point (graded)

Next, the team is interested in the size of buildings. The variable "area" represents the size of the building. The team is particularly interested in those buildings that are under 100 years of age. Of those buildings, what percent of buildings have an area greater than 50?

•	18.3% ~	
0	81.7%	
0	40.8%	
0	59.2%	
S	ubmit	You have used 1 of 1 attempt
\sim	estion	7
1.0/1 The with shou	.0 point (team wa area les uld this k	ants you to do further work with the 'area' variable, focusing on buildings is than 150. Make a histogram of "area" using only these buildings. How be described?
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1.0/1.0 point (graded)
What variable type is damage_grade ?

O Date	
● Numer	ic
O Curren	су
O String	
Submit	You have used 1 of 1 attempt

Question 9

0.0/1.0 point (graded)

The team is revisiting the relationship between area and age. For this analysis, the team wants *only* buildings that **have an age less than 150 and an area less than 200**. For these buildings, make a scatter plot of the relationship between age and area. Put age on the x-axis and area on the y-axis. What describes their relationship?

There is an upward trend such that older buildings are larger
 There is a curvilinear trend, such that older buildings and newer buildings are smallest X
O There is no discernible relationship
Submit You have used 1 of 1 attempt
Question 10 1.0/1.0 point (graded) Refer to the scatter plot in the previous question. Assume that you are going to next quantify the relationship between age and area. That correlation should be
A negative number between 0 and -1
O A positive number between 0 and +1
A negative number between -1 and -2
A negative number between -1 and -2Approximately zero

1.0/1.0 point (graded)

The team next wishes to examine how well the buildings made of stone fared in the disaster. Stone buildings have a score of "1" on the

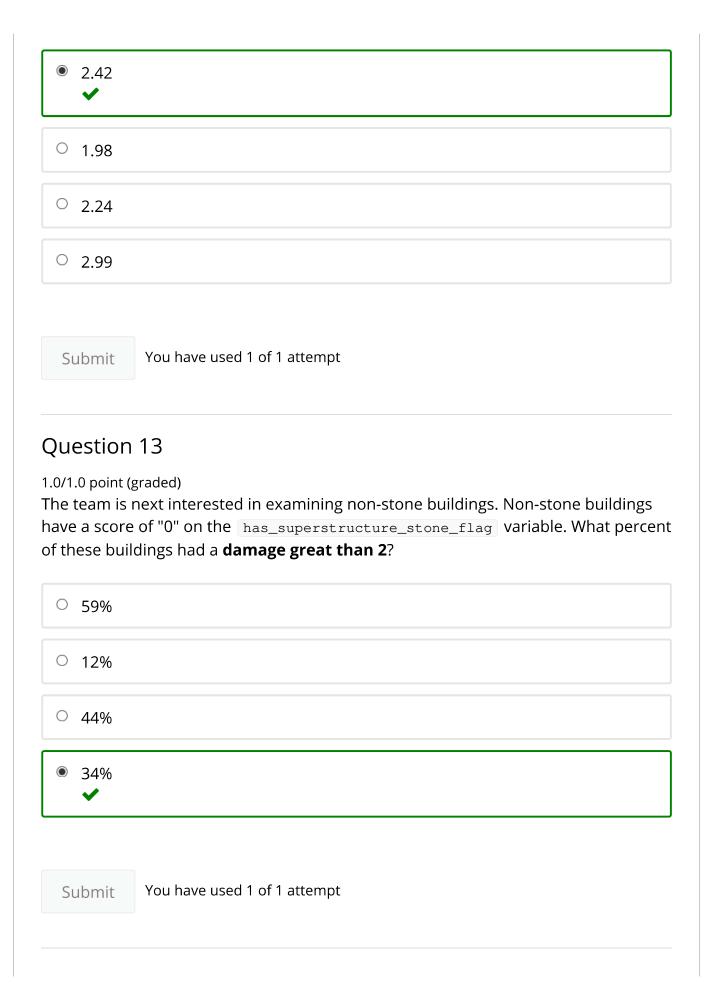
has_superstructure_stone_flag variable. The team is worried that these buildings were particularly hard hit (damage_grade of 3). How many stone buildings had this level of damage?

O 59%	
0 12%	
44%	
O 34%	
Submit	You have used 1 of 1 attempt

Question 12

1.0/1.0 point (graded)

Continuing your work with stone buildings, what was the mean damage of buildings made of stone (possible range: 0-3)?



1.0/1.0 point (graded)

What was the **mean** damage of buildings not made of stone?

O 2.42

○ 1.98

● 2.24✓

O 2.99

Submit You have used

You have used 1 of 1 attempt

Question 15

0.0/1.0 point (graded)

The team awaits your final conclusion regarding stone buildings. The best summary statement you could make about stone vs. non-stone buildings on the basis of this data?

O Stone buildings survived the earthquake better

Stone buildings suffered worse damage

There was little apparent difference



O Stone buildings were virtually undamaged

You have used 1 of 1 attempt

Question 16

1.0/1.0 point (graded)

The researchers want to assess the impacts of other building materials. There are several <code>has_superstructure_</code> materials variables, each describing a different building material. Ignoring reinforced concrete buildings (the <code>rc_non_engineered</code>, <code>rc_engineered</code> ones), which of the other types had the lowest average (mean) damage grade?

O Bamboo	
● Brick✓	
O Adobe mud	
O Timber	
Submit You have used 1 of 1 attempt	

Question 17

1.0/1.0 point (graded)

On average, buildings that have a secondary use (has_secondary_use) had...

● Less damage✓
○ Zero damage
O More damage
Essentially equal damage
Submit You have used 1 of 1 attempt
Question 18
0.0/1.0 point (graded) Building damage may differ for multi-family dwellings; this is very important as the safety of multi-family dwellings can impact many families at once. Compare buildings that have one family in them vs more than one family (count_families). You should report to the team that buildings that have only one family had, on average, had
O Slightly less damage (a difference within .25 points)
O Zero damage
More damageX
O Considerably less damage (a difference greater than .50 points)

You have used 1 of 1 attempt

Question 19

0.0/1.0 point (graded)

Imagine you were tasked to evaluate each building material, as well as the role of building age and area, in earthquake damage. Imagine you were asked to produce a document analyzing those roles, this would be ...

O A dashboard
O A scorecard
O An analytic report
An analysis X

Submit

You have used 1 of 1 attempt

Question 20

0.0/1.0 point (graded)

Imagine you created a tool for damage surveyors in the field that would tally the damage and other building stats that updates as new data comes in. It might have several graphs and other statistics that update in real time. This would be:

O Dashboard
O Scorecard
Analytic reportX
O Analysis
Submit You have used 1 of 1 attempt
Review Questions
The next 10 questions relate to the data analysis track as a whole.
Ouestion 21
Question 21
1.0/1.0 point (graded) The <i>most important</i> goal of a data analyst working in any organization is to
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1.0/1.0 point (graded) The most important goal of a data analyst working in any organization is to Find insights that the organization can use Find the most statistically significant results

You have used 1 of 1 attempt

Question 22

1.0/1.0 point (graded)

Which is a goal in healthcare data analytics?

- Optimize business goals
- Optimize health of patients
- Optimize efficiency of organization
- All of these are goals in healthcare analytics

Submit

You have used 1 of 1 attempt

Question 23

0.0/1.0 point (graded)

Why are bar graphs better than pie charts at showing distributions of categorical (category) data?

O You can more easily see the counts with bar graphs
O Pie charts are hard to read when you have many small groups
O You can still compare group size with bar graphs
 All of these are reason to prefer bar graphs over pie charts
Submit You have used 1 of 1 attempt
Question 24 1.0/1.0 point (graded) Which of the following quick calculations would tell you the revenue of a business for a given product?
O Quantity sold x value of goods
O (Value of goods / inventory of goods) - quantity sold
Quantity of goods x price of goods
O The sum of quantity of goods / price of goods
Submit You have used 1 of 1 attempt

Question 25
1.0/1.0 point (graded)
For analysts to draw insights from data, they first need to take data from a and make a with tools such as SQL.
Database; table
Y
O Table; database
O Tables avanta
Table; graph
O Graph; table
Submit You have used 1 of 1 attempt
Question 26
1.0/1.0 point (graded)
Rules such as "don't break the law" or "do no harm" are examples of in data analytics ethics.
O Moral maximums
Moral minimums
• Moral Hillimums
O Ethical hypotheses
Ethical hypotheses
Ethical deductions

You have used 1 of 1 attempt

Question 27

1.0/1.0 point (graded)

All of the following are types of graphs except:

Pie chart
 Bar chart
 Butterfly chart
 Prism chart

Submit

You have used 1 of 1 attempt

Question 28

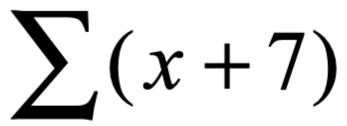
1.0/1.0 point (graded)

When crafting a data analytics story, one should always

O Support one's opinion
O None of these
Know one's audience
Submit You have used 1 of 1 attempt
Question 29 1.0/1.0 point (graded)
Which should we do when improving our slides and other visual materials when crafting analytics stories?
Which should we do when improving our slides and other visual materials when
Which should we do when improving our slides and other visual materials when crafting analytics stories?
Which should we do when improving our slides and other visual materials when crafting analytics stories? Have many visual borders
Which should we do when improving our slides and other visual materials when crafting analytics stories? Have many visual borders Increase amount of text

1.0/1.0 point (graded)

What does the following sigma notation instruct the data analyst to do?



- Add seven to every score, then sum the total
 - **~**
- Add the sum of every score to seven
- O Start with seven, sum every score, and add them together
- None of these

Submit

You have used 1 of 1 attempt

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