✓ **Congratulations! You passed!**

Grade received 100%   **To pass** 80% or higher

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Weekly challenge 4

Latest Submission Grade 100%

1. In the following spreadsheet, the column labels in row 1 are called what?

1 / 1 point

	A	B	C	D
1	**Rank**	**Name**	**Population**	**County**
2	1	Charlotte	885,708	Mecklenburg
3	2	Raleigh	474,069	Wake (seat), Durham
4	3	Greensboro	296,710	Guilford
5	4	Durham	278,993	Durham (seat), Wake, Orange
6	5	Winston-Salem	247,945	Forsyth
7	6	Fayetteville	211,657	Cumberland
8	7	Cary	170,282	Wake, Chatham
9	8	Wilmington	123,784	New Hanover
10	9	High Point	112,791	Guilford, Randolph, Davidson, Forsyth
11	10	Concord	96,341	Cabarrus

○ Criteria

○ Characteristics

◉ Attributes

○ Descriptors

✓ **Correct**
The column labels in row 1 are attributes that refer to the data in the column. An attribute is a characteristic or quality of data used to label a column in a table.

2. In the following spreadsheet, where can you find all of the attributes—also known as the observation—of Fayetteville?

1 / 1 point

	A	B	C	D
1	**Rank**	**Name**	**Population**	**County**
2	1	Charlotte	885,708	Mecklenburg
3	2	Raleigh	474,069	Wake (seat), Durham
4	3	Greensboro	296,710	Guilford
5	4	Durham	278,993	Durham (seat), Wake, Orange
6	5	Winston-Salem	247,945	Forsyth
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11	10	Concord	96,341	Cabarrus

◉ Row 7

○ Column B

○ Row 6

○ Cell B7

✓ **Correct**
The observation for Fayetteville is in row 7. An observation is all of the attributes for something contained in a row of a data table.

3. If a data analyst wants to list the cities in this spreadsheet alphabetically, instead of numerically, what feature can they use in column B?

1 / 1 point

	A	B	C	D
1	**Rank**	**Name**	**Population**	**County**
2	1	Charlotte	885,708	Mecklenburg
3	2	Raleigh	474,069	Wake (seat), Durham
4	3	Greensboro	296,710	Guilford
5	4	Durham	278,993	Durham (seat), Wake, Orange
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11	10	Concord	96,341	Cabarrus

○ Randomize range

◉ Sort range

○ Organize range

○ Name range

✓ **Correct**
Sort range would be used to alphabetize the city names in column B. Sorting a range of data from A to Z helps data analysts organize and find data more quickly.

4. A data analyst types =POPULATION(C2:C11) to find the average population of the cities in this spreadsheet. However, they realize they used the wrong formula. What syntax will correct this function?

1 / 1 point

	A	B	C	D
1	Rank	Name	Population	County
2	1	Charlotte	885,708	Mecklenburg
3	2	Raleigh	474,069	Wake (seat), Durham
4	3	Greensboro	296,710	Guilford
5	4	Durham	278,993	Durham (seat), Wake, Orange
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11	10	Concord	96,341	Cabarrus

○ AVERAGE(C2:C11)

○ AVERAGE(C2-C11)

◉ =AVERAGE(C2:C11)

○ =AVERAGE(C2-C11)

✓ **Correct**
The correct AVERAGE function syntax is =AVERAGE(C2:C11). AVERAGE returns an average of values from a selected range. C2:C11 is the specified range.

5. You are working with a database table named *playlist* that contains data about playlists for different types of digital media. You want to review all the columns in the table.

1 / 1 point

You write the SQL query below. Add a FROM clause that will retrieve the data from the *playlist* table.

```
1   SELECT
2   *
3   FROM
4   playlist
5   WHERE
6   playlist_id = 3;
```

Run

Reset

```
+-------------+----------+
| playlist_id | name     |
+-------------+----------+
|           3 | TV Shows |
+-------------+----------+
```

What is the playlist with ID number 3?

○ Movies

○ Music

○ Audiobooks

◉ TV Shows

✓ **Correct**
The clause `FROM playlist` will retrieve the data from the *playlist* table. The complete query is `SELECT * FROM playlist`. The FROM clause specifies which database table to select data from. The playlist with ID number 3 is TV Shows.

6. You are working with a database table that contains invoice data. The *customer_id* column lists the ID number for each customer. You are interested in invoice data for the customer with ID number 54.

1 / 1 point

You write the SQL query below. Add a WHERE clause that will return only data about the customer with ID number 54.

```
1   SELECT
2   billing_address
3   FROM
4   invoice
5   WHERE
6   customer_id = 54;
```

Run

Reset

```
+-----------------+
| billing_address |
+-----------------+
| 110 Raeburn Pl  |
| 110 Raeburn Pl  |
```

```
| 110 Raeburn Pl |
| 110 Raeburn Pl |
| 110 Raeburn Pl |
| 110 Raeburn Pl |
| 110 Raeburn Pl |
+----------------+
```

What is the billing address for the customer with ID number 54?
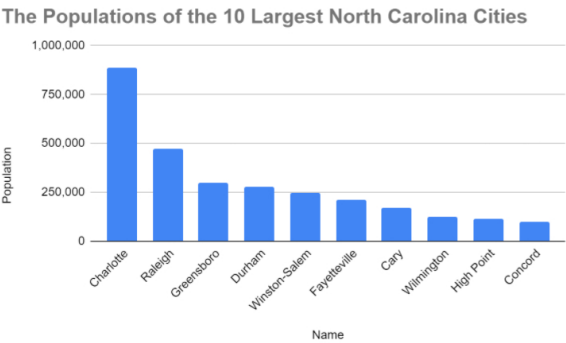
- ◉ 110 Raeburn Pl

- ○ 801 W 4th St

- ○ 1033 N Park Ave

- ○ 230 Elgin St

> ✓ **Correct**
> The clause WHERE customer_id = 54 will return only data about the customer with ID number 54. The complete query is SELECT * FROM invoice WHERE customer_id = 54. The WHERE clause filters results that meet certain conditions. The WHERE clause includes the name of the column, an equals sign, and the value(s) in the column to include. The billing address for the customer with ID number 54 is 110 Raeburn Pl.

7. A data analyst creates the following visualization to clearly demonstrate how much more populous Charlotte is than the next-largest North Carolina city, Raleigh. It's called a line chart.
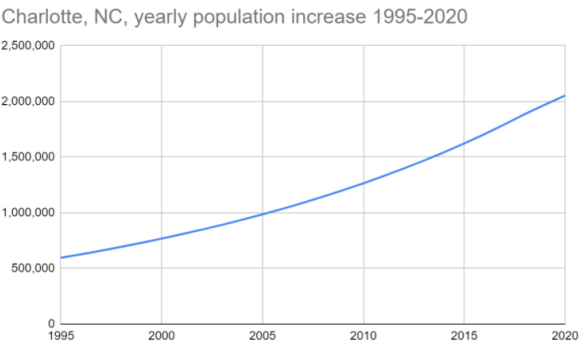
The Populations of the 10 Largest North Carolina Cities

- ○ True

- ◉ False

> ✓ **Correct**
> This is a column chart. A column chart is effective at demonstrating the differences between several items in a specific range of values.

8. A data analyst wants to demonstrate how the population in Charlotte has increased over time. They create the chart below. What is this type of chart called?

Charlotte, NC, yearly population increase 1995-2020

- ○ Column chart

- ○ Bar chart

- ◉ Line chart

- ○ Area chart

> ✓ **Correct**
> This is a line chart. Line charts are effective for demonstrating trends and patterns, such as how population changes over time.