Data Types and Visualization

Practice Quiz • 27 min • 9 total points

1. What is the characteristic feature of numerical data? **1 / 1 point**

- ○ Ability to sort/order the data
- ○ Ability to categorize data
- ◉ Ability to perform arithmetic operations on the data
- ○ Ability to uniquely identify data points

✓ **Correct**
This is the unique characteristic of numerical data.

2. Lion Burgers has two shops in the city of Ahmedabad: shop A and shop B. On a certain day, there were 40 customers in shop A and 75 customers in shop B. The average sales in shop A were Rs 95. The average sales in shop B were Rs 85. What were the approximate average sales in Ahmedabad? **1 / 1 point**

- ◉ Rs 88.48
- ○ Rs 85
- ○ Rs 95
- ○ Rs 90

✓ **Correct**
Yes, the correct answer is $\frac{40\times95+75\times85}{40+75}$.

3. Lion Burgers has two shops in the city of Ahmedabad – shop A and shop B. On a certain day, there were 40 customers in shop A and 75 customers in shop B. The average sales in shop A were Rs 95. The average sales in shop B were Rs 85. What were the median sales in Ahmedabad? **1 / 1 point**

- ○ Rs 90
- ○ Rs 88.48
- ○ Rs 95
- ◉ Insufficient data for the problem

✓ **Correct**
You don't have sufficient information to answer this problem because there might be very different values for sales in shops A and B.

4. The table below lists four parameters of students: name, school, score, and parents' education level. **1 / 1 point**

Name	School	Score	Parents' education level
Azhagan	ABC	54	High School
Brad	ABC	64	College
Cheran	XYZ	81	Doctoral
Dinesh	ABC	70	College
Ezhil	XYZ	76	Doctoral
Falguni	XYZ	83	High School
Greg	ABC	55	High School

Statement 1: The standard deviation of the scores of students in school XYZ is greater than the standard deviation of the scores of students in school ABC.

Statement 2: If data A has greater dispersion than data B, then data A has a larger standard deviation than data B.

Which of the following is true?

Statement 1: The standard deviation of the scores of students in school XYZ is greater than the standard deviation of the scores of students in school ABC.

Statement 2: If data A has greater dispersion than data B, then data A has a larger standard deviation than data B.

Which of the following is true?

- ○ Statement A is true; statement B is true; statement A is the correct explanation of statement B.
- ○ Statement A is true; statement B is false.
- ○ Statement A is true; statement B is true; statement A is not the correct explanation of statement B.
- ◉ Statement A is false; statement B is true.

✓ **Correct**
Statement A is indeed false because the scores of students in XYZ are less dispersed and hence have a lesser standard deviation.

5. The table below lists four parameters of students: name, school, score, and parents' education level. **1 / 1 point**

Name	School	Score	Parents' education level
Azhagan	ABC	54	High School
Brad	ABC	64	College
Cheran	XYZ	81	Doctoral
Dinesh	ABC	70	College
Ezhil	XYZ	76	Doctoral
Falguni	XYZ	83	High School
Greg	ABC	55	High School

What is the difference between the 75^{th} percentile score and the 25^{th} percentile score in the above data set?

- ○ 0
- ○ 29
- ◉ 26
- ○ 19

✓ **Correct**

6. The table below lists four parameters of students: name, school, score, and parents' education level. **1 / 1 point**

Name	School	Score	Parents' education level
Azhagan	ABC	54	High School
Brad	ABC	64	College
Cheran	XYZ	81	Doctoral
Dinesh	ABC	70	College
Ezhil	XYZ	76	Doctoral
Falguni	XYZ	83	High School
Greg	ABC	55	High School

What is the difference between the average scores of the students attending XYZ and the students attending ABC (approximately)?

- ○ 0
- ◉ 19.5
- ○ 20.5
- ○ 69

✓ **Correct**
The individual averages are 80 and 60.75.

7. The table below lists four parameters of students: name, school, score, and parents' education level. 1 / 1 point

Name	School	Score	Parents' education level
Azhagan	ABC	54	High School
Brad	ABC	64	College
Cheran	XYZ	81	Doctoral
Dinesh	ABC	70	College
Ezhil	XYZ	76	Doctoral
Falguni	XYZ	83	High School
Greg	ABC	55	High School

Which of the following columns is an example of an ordinal data type?

- (●) Parents' education level
- ( ) Score
- ( ) School
- ( ) Name

Correct
This can be usefully categorized and sorted as High school < College < Doctoral.

8. The table below lists four parameters of students: name, school, score, and parents' education level. 1 / 1 point

Name	School	Score	Parents' education level
Azhagan	ABC	54	High School
Brad	ABC	64	College
Cheran	XYZ	81	Doctoral
Dinesh	ABC	70	College
Ezhil	XYZ	76	Doctoral
Falguni	XYZ	83	High School
Greg	ABC	55	High School

Which of the following columns is an example of a nominal data type?

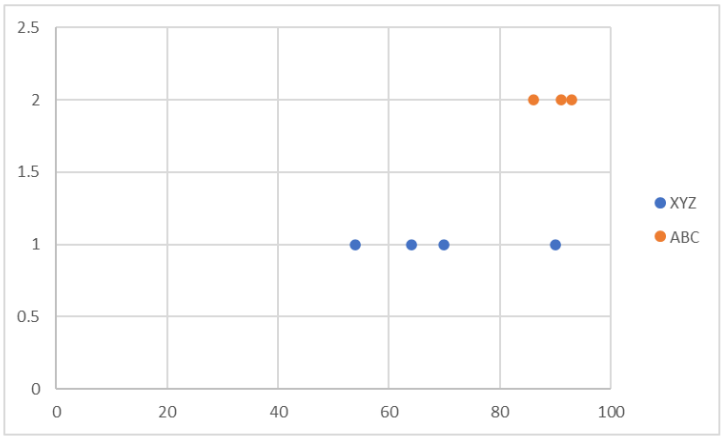
- ( ) Parents' education level
- ( ) Score
- ( ) School
- (●) Name

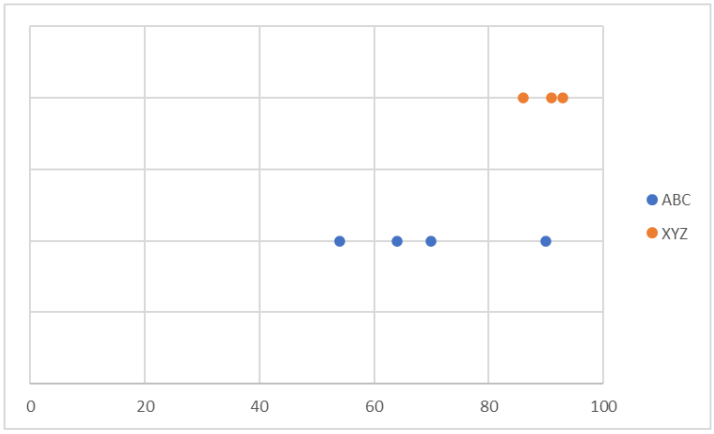
Correct
This is purely for information, potentially for unique identification.

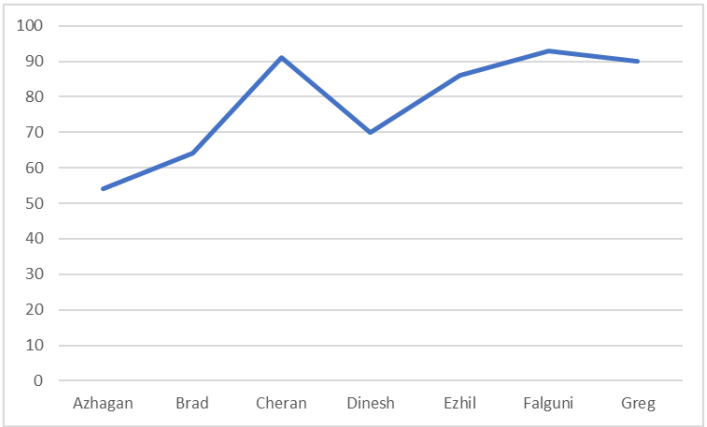
9. The table below lists four parameters of students: name, school, score, and parents' education level. 1 / 1 point

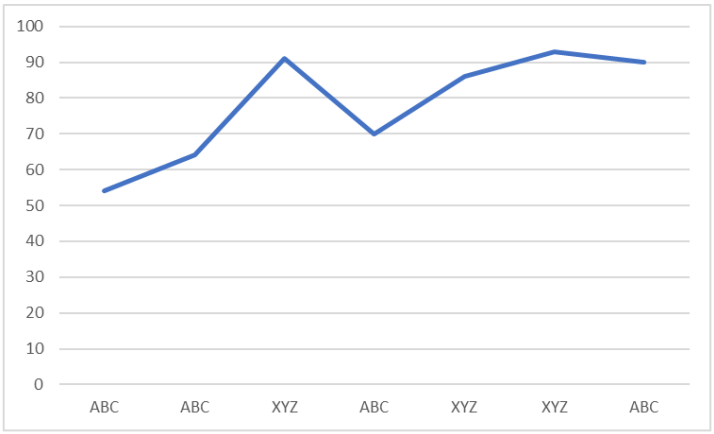
Name	School	Score	Parents' education level
Azhagan	ABC	54	High School
Brad	ABC	64	College
Cheran	XYZ	81	Doctoral
Dinesh	ABC	70	College
Ezhil	XYZ	76	Doctoral
Falguni	XYZ	83	High School
Greg	ABC	55	High School

Which of the following options is the correct and most useful representation indicating the differences in performances of the students in different schools?


2.5
2
1.5
1
0.5
0
0
20
40
60
80
100
XYZ
ABC


0
20
40
60
80
100
ABC
XYZ


100
90
80
70
60
50
40
30
20
10
0
Azhagan
Brad
Cheran
Dinesh
Ezhil
Falguni
Greg



Correct

This graph clearly shows the distinction between the distribution of scores of students in both schools, indicating the variability in scores.