Practice Test 1

Started: Apr 21 at 2:05pm

Quiz Instructions

This quiz will include questions from the Test 1 material that you can expect to see on our tests and the final exam.

You have unlimited attempts on this quiz before the due date. If you make a perfect score on this practice test, you will be awarded one extra credit point on Test 1.

No late assignments will be accepted.

<table>
<thead>
<tr>
<th>Question 1</th>
<th>1 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Which of the following data lists is represented by this frequency table:</td>
<td></td>
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<tr>
<td></td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>f</td>
</tr>
<tr>
<td><em>(3, 1, 1, 2, 2, 6, 6, 6, 2, 2, 2, 4, 4, 4, 4, 4)</em></td>
<td></td>
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<tr>
<td><em>(1, 1, 1, 2, 3, 3, 4, 4, 5, 5, 6, 6)</em></td>
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<tr>
<td><em>(1, 1, 1, 2, 3, 3, 4, 4, 4, 4, 4, 4, 5, 5, 6, 6)</em></td>
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<td><em>(1, 1, 1, 2, 2, 2, 3, 4, 4, 4, 4, 4, 5, 6, 6)</em></td>
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<tr>
<td><em>(1, 2, 2, 3, 3, 4, 4, 4, 4, 5, 5, 5, 5, 6, 6, 6)</em></td>
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<table>
<thead>
<tr>
<th>Question 2</th>
<th>1 pts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Using Excel, how would you find the standard deviation for a sample of heart patients' LDLs located in cells C1 to C16?</td>
<td></td>
</tr>
<tr>
<td><em>(STDEV.P(C1 : C16))</em></td>
<td></td>
</tr>
<tr>
<td><em>(STANDDEV.S(C1 : C16))</em></td>
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<tr>
<td><em>(STDEV.S(C1 : C16))</em></td>
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<td><em>(STDEV.SAMP(C1 : C16))</em></td>
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<td><em>(STDEV(C1 : C16))</em></td>
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<td><em>(STANDDEV(C1 : C16))</em></td>
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</tbody>
</table>
Question 4

A university dean wants to know how many credits students are taking. They randomly sample some students and put the results in the histogram below.

![Histogram showing the number of credits taken by students.

How many students are taking between 3 and 12 credits?

- 5
- 11
- 3
- 9

Question 5

When is the mode most useful?

- Never
- Categorical data
- Numerical data
- Numerical data when significant outliers are present
The figure below shows the density curves of three normally distributed random variables $X_A$, $X_B$, and $X_C$. Their standard deviations (in no particular order) are 20, 5, and 10.

Use the figure to identify the values of the means and standard deviations of the three random variables.

The mean of $A$

The mean of $B$

The mean of $C$

The standard deviation of $A$

The standard deviation of $B$

The standard deviation of $C$

**Match Choices:**

| 10 | 20 | 5 | -60 | 60 | 0 |
Question 11

Give the median of the following data set:

2 3 4 6 8 11

- 5
- 6
- 8
- 6.5
- 7.5
- 7

Question 12

A nurse tells a couple that their newborn's weight is in the 72nd percentile. This means that

- Their baby's weight is about 72% that of the average baby.
- About 72% of all babies weigh more than theirs.
- About 72% of all babies weigh less than theirs.
- Their baby is the 72nd baby with this weight.
- Their baby weighs about 72 ounces.
Identify the following measures as either quantitative or qualitative:

- The 30 high-temperature readings of the last 30 days
- The genders of the first 40 newborns in a hospital one year
- The age (in years) of 20 randomly selected fashion models
**Question 17**

(a) and therefore we expect that the mean is skewed left and the median is skewed right.

(b) and therefore we expect that the mean is the same as the median.

(c) and therefore we expect that the mean is lower than the median.

**Question 18**

A criminal justice researcher randomly selects twenty police officers in a county to study their arrest rate. One officer has over 100 arrests while the other officers have made very few arrests. How does the mean compare to the median?

- Mean > Median
- Mean = Median
- Mean < Median
- Impossible to tell without further information
Question 20

The mean height for an adult male is 171 cm with a standard deviation of 16 cm. Ruhal is told that the z-score of his height is 2.2.

Is Rahul's height above average or below average?

- Above average
- It is impossible to say from the data given
- Below average

Question 21

A kinesiology student is interested in the impact of wrist extension while using a computer keyboard on carpal tunnel syndrome. The student takes a random sample of 30 typists, and finds their average wrist extension to be 29 degrees with a standard deviation of 4 degrees. How would you find a z-score corresponding to a typist with a wrist extension of 31 degrees in Excel?

- z = 31 - 29 / 4
- z = (31 - 30) / 4
- z = (29 - 31) / 4
- z = (31 - 29) / 4
- z = (29 - 31) / 4
- z = (30 - 29) / 4