**Describing Data 2 Summarising Data**

1. Which one of the following is not a measure of the ‘centre’ of a set of data?
   1. Mode
   2. Range
   3. Mean
   4. Median
2. What do we generally mean by the ‘average’?
   1. Mode
   2. Range
   3. Mean
   4. Median
3. Which measure is most likely to be affected by a single extreme data value?
   1. Mean
   2. Median
   3. Mode
   4. None of them
4. Calculate the mean of the following numbers: 2, 4, 5, 6, 10?
   1. 5
   2. 5.5
   3. 4.5
   4. 5.4
5. Calculate the median of the following numbers: 2, 4, 5, 6, 10?
   1. 5
   2. 5.5
   3. 4.5
   4. 5.4
6. What is the mode of the following set of data: 2,3,2,2,3,4,5,2,5,2,4,3?
   1. 3
   2. 2.5
   3. 2
   4. 3.08
7. Does a distribution that is ‘skewed to the right’:
   1. have a longer tail to the right
   2. have a longer tail to the left
   3. remain symmetrical about the mode
   4. remain symmetrical about the median
8. If mean > median, what is the usual shape of the distribution?
   1. Skewed to the right
   2. Skewed to the left
   3. Symmetric
   4. Clustered closely together
9. What is the range of the numbers 3, 4, 5, 6, 7?
   1. 3
   2. 4
   3. 5
   4. 7
10. How could you describe the variance of a set of numbers?
    1. The mean deviation
    2. The mean absolute deviation
    3. The mean squared deviation
    4. None of these
11. Calculate the sample variance of the following numbers: 2, 4, 5, 6, 10?
    1. 8.8
    2. 1.96
    3. 2.97
    4. 2.16
12. Without doing any calculations, which of the following data sets do you think has the smallest standard deviation.
    1. 1, 5, 10
    2. 1, 2, 10
    3. 2, 4, 10
    4. 4 , 5, 10
13. For a sample variance, why do you divide the sum of squared deviations by (n-1) rather than n?
    1. Because that is the calculation done by standard software
    2. Because a sample tends to underestimate the population variance
    3. Because a sample tends to overestimate the population variance
    4. Because it is easier
14. According to Chebysheff’s rule, what proportion of observations are generally within 2 standard deviations of the mean?
    1. 25% of them
    2. 50% of them
    3. 75% of them
    4. all of them
15. In a class of students the mean mark awarded in a test was 45% with a standard deviation of 5%. Which of the following statements is true?
    1. Exactly 75% of students scored between 35% and 55%
    2. At least 75% of students scored between 35% and 55%
    3. At most 11% of students scored over 55%
    4. No student scored less than 30%
16. In the equation μ = ∑x / n what is usually meant by μ and ∑x?
    1. the standard deviation and variance
    2. the variance and number of observations
    3. the mean and number of observations
    4. the mean and sum of observations

1. What is measured by the equation  / (n-1)?
   1. the mean
   2. the standard deviation
   3. the sample variance
   4. the kurtosis
2. What is the upper quartile?
   1. The point that 25% of values are greater than
   2. The point that 50% of values are greater than
   3. the point that 75% of values are greater than
   4. None of the above
3. What are the lower and upper quartiles for the numbers 1 2 8 1 2 2 7 1
   1. 1 and 2
   2. 1 and 7
   3. 1 and 5.75
   4. 2 and 7
4. If a value today is 194 and in a base year it was 146, what is the usual index for describing the present value?
   1. 194
   2. 133
   3. 1.33
   4. 0.33
5. Two common weightings for aggregate indices are:
   1. base-weighted and current-weighted
   2. base-weighted and annual-weighted
   3. explicit-weighted and implicit-weighted
   4. common-weighted and current weighted

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| Question | Answer |
| 1 | B |
| 2 | C |
| 3 | A |
| 4 | D |
| 5 | A |
| 6 | C |
| 7 | A |
| 8 | A |
| 9 | B |
| 10 | C |
| 11 | A |
| 12 | D |
| 13 | B |
| 14 | C |
| 15 | B |
| 16 | D |
| 17 | C |
| 18 | A |
| 19 | C |
| 20 | B |
| 21 | A |