Biostatistics Exam 2016 Test #9

1. **Which of the following data sets has the smallest range?**
a) 43, 45, 46, 47, 47, 48, 50, 51, 51, 51, 51
b) 21, 25, 26, 27, 27, 27, 28, 29, 32, 36, 39
c) 12, 13, 13, 14, 14, 14, 15, 15, 16, 16, 16
d) 67, 67, 68, 70, 70, 71, 72, 72, 72, 74, 75

2. **If data are left-skewed, which of the following is true about the mean?**
a) Mean is equal to the mode.
b) Mean is bigger than the mode.
c) Mean is smaller than the mode.
d) None of the statements above is true.

3. **If all the values of X are increased 10 times, then the standard deviation:………………………………..**

4. **Mean weight of 500 male volleyball players is found to be 93 kg with a standard deviation of 6 kg. Data are normally distributed. The number of volleyball players from this sample whose weight is more than 99 kg is equal to:………………………………..**

5. **If all the values of a data set are the same, the standard deviation is equal to:………………………………..**

6. **Mean birth height of 600 newborns is found to be 50 cm with a standard deviation of 2 cm. Data are normally distributed. The number of newborns from this sample whose birth height is more than 54 cm or less than 46 cm is equal to: ………………………………..**

7. **Height is measured on what type scale?**
a) Interval
b) Nominal
c) Ratio
d) Ordinal

8. **A study investigated blood sugar levels in two groups of diabetes type 2 patients. Patients on a conventional medicinal therapy had a mean blood sugar level of 106 mg/dL, while patients on an experimental medicinal therapy had a mean blood sugar level of 117 mg/dL. P-value was found to be 0.02. What did the study conclude?**
a) There was no significant difference in the clinical effectiveness of the two medicinal therapies.
b) There was a significant difference in the clinical effectiveness of the two medicinal therapies.
c) The experimental therapy was significantly more effective in terms of blood sugar control in diabetes type 2.
d) The conventional therapy was significantly more effective in terms of blood sugar control in diabetes type 2.

9. **McNemar test is the non-parametric analogue of which parametric test:**
a) chi-square test
b) one-sample t-test
c) paired t-test test
d) two-sample t-test

10. **A study aims to investigate if there is an association between diagnosis and inpatient costs. What hypothesis test could be used?**
a) paired t-test
b) Mann-Whitney test
c) chi-square test
d) two-sample t-test