QM213 Review Questions Week 5

1. What's the probability of an impossible event?

2. If the digits in a set of accounting books follow the uniform probability distribution, what is the expected relative frequency of the 1 digit?

3. If you are working with a Normal distribution whose mean is 1000 and whose standard deviation is 100, what is the probability (shown to 3 significant figures only) of choosing a value from this distribution at random that is 900 or less?

4. If you are working with a computed statistic that follows the chi-square distribution with 28 degrees of freedom, how would you compute the probability of getting a value of the chi-square that is equal to or larger than the observed x of 6.062 by chance alone?

5. What Excel 2007/2010 function defines the area under the curve to the left of a given value of z, the standard normal deviate?

6. If you are working with a chi-square distribution with 8 degrees of freedom, what is the probability (shown to 4 decimal digits only) of choosing a value from this distribution at random that is 13.841 or more?

7. If you are working with a computed statistic that follows Student's-t distribution with 12 degrees of freedom, how would you compute the probability of getting a value of Student's-t that is equal to or larger than the observed t of 19.2 by chance alone?

8. If you are working with a computed statistic that follows the F distribution with 12 and 8 degrees of freedom, how would you compute the probability of getting a value of the F that is equal to or larger than the observed F of 11.2 by chance alone?

9. What's the probability of an absolutely certain event?

10. How do you compute the area under the curve to the right of a given value of z, the standard normal deviate, using EXCEL 2007/2010 functions?

11. What is the total in % of the area under an entire relative frequency distribution curve?

12. The line graph representing the cumulated frequencies in a frequency distribution is called a[n]_____.

13. If you are working with a Normal distribution whose mean is 100 and whose standard deviation is 10, how would you compute the probability of choosing a value from this distribution of 110 or less using EXCEL 2007/2010 functions?

14. What is the standard deviation of the standard Normal distribution?

15. If you toss a two-sided coin and call one side head and the other side tail, what is the probability that you will see a head on both of two fair tosses of that coin (i.e., the probability of seeing two heads in two tosses)?

16. For a uniform probability density function, which of the following statements is true?

17. If you create a histogram of all the data in a sample consisting of 218 measurements, what is the total of all the frequencies?

18. If you have 20 cookies in a bag and 13 of them are chocolate and 7 of them are vanilla (and they feel exactly the same to your fingers), what is the probability that you will get a chocolate cookie by reaching into the bag without looking and picking one at random?

19. If you are working with a computed statistic that follows Student's-t distribution with 25 degrees of freedom, how would you compute the probability of getting a value of Student's-t that is equal to or larger than the observed t of 5.75 by chance alone?

20. The sum of the relative frequencies in % for all classes will always equal _____.

21. What is the mean of the standard Normal distribution?

22. If you are working with a computed statistic that follows Student's-t distribution with 10 degrees of freedom, how would you compute the probability of getting a value of Student's-t that is less than or smaller than the observed t of -2.04 by chance alone?

23. The uniform probability distribution can be used to test the randomness of _____.

24. If you toss a two-sided coin and call one side head and the other side tail, what is the probability that you will see a head on a single fair toss of that coin?

25. A uniform probability distribution is a continuous probability distribution where the probability that the random variable assumes a value in any interval of equal length is_____.

26. If you are working with an F distribution with 10 and 6 degrees of freedom, what is the probability (shown to 4 decimal digits only) of choosing a value from this distribution at random that is 5.341 or more?

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