doubtnut
India's Number 1 Education App

MATHS

BOOKS - UNITED BOOK HOUSE

Ramakrishna Mission Boys Home High School, Question Paper

Exercise

1. The number of different 6-digit numbers that can be formed using the three digits 0,1,2

is

A. science

B. an art

C. both science as well as art

D. neither science nor at

Answer:

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2. The maximum contribution is statisctics has made by

A. Businessman

B. Econometricians

C. Scientists

D. None of these

Answer:

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3. A frequency distribution is said to be leptokustic when

A. $\beta_2 < 3$

B. $\beta_2 = 3$

C. $\beta_2 > 3$

D. None of these

Answer:

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4. The M.D. about Mode for the numbers 4/11, 6/11,8/11,9/11,12/11,8/11 is

A. a) $\frac{8}{11}$

B. b) $\frac{1}{6}$

C. c) $\frac{6}{11}$

D. d) $\frac{5}{11}$

Answer:

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5. Find the minimum value of $\sec^2\theta + \cos^2\theta$

A. attribute

B. discrete variable

C. continuous variable

D. None of these

Answer:

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6. Which of the following is correct?

A. a) $15 \equiv 27 (\text{mod } 5)$

B. b) $15 \equiv 27 \text{ (mod } 3)$

C. c) $15 \equiv 27 \text{ (mod)}$

D. d) $15 \equiv 27 \text{ (mod } 11)$

Answer:

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7. If A.M. and coefficient of variation of x is 6 and 50% respectively, then variance of x is

A. a) 7

B. b) 9

C. c) 3

D. d) none of these

Answer:

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8. If the number of educated persons is 65% of the population, then in piediagram, angle is needed to mark the sector is

A. 232°

B. 230°

C. 234°

D. none of these

Answer:

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9. Two variables x and y are related as y = 3 - 7x and Q_1, Q_3 of x are respectively 5 and 11, then the value of Q_3 of y is

A. (-)74

B. 21

C. (-)32

D. none of these

Answer:

10. Under what condition, the weighted average becomes identical to the simple average?

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11. For a set of 20 observations A.M. is 4.0 and the coefficient of variation is 80 percent. Find the S.D.

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12. Determine the median of prime numbers between 50 and 82.

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13. In a moderately skew distribution mode = 3. Median + k. mean then find the value of k.

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14. Of 1 a 1 < 1 and 1 b 1 < 1 then show that 1a + b1 < |1 + ab|.

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15. What do you mean by purchasing power of money?

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16. What are the tests proposed by Fisher's for checking the goodness of an index number?

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17. There are three children aged 3, 4 and 5 years in a room. If another 4 year old child enters the room what will be the effect on mean age and variance age?

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18. The G.M of two numbers is 18. If by mistake one figure is taken as r^2 instead of 21, find the correct G.M.

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19. How the median is affected all the original observations are increased by 10?

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20. Write two numbers with mean 10 and variance 4.

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21. If two variables x and y be connected by the relation x = a + by then find third moment of x.

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22. Prove that the A.M of the reciprocal of two numbers can not be smaller than the reciprocal of their A.M.

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23. If the sum of the squares of the differences of the 10 values of a variable from its mean 50 be 250, find the coefficient of variation.

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24. Find the A.M. of 0.5, 0.55, 0.555,.....upto k-th term.

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25. Define ordianl and nominal data.

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26. If the mean of the five consecutive positive integers is 12, find the mean of the least and the highest value.

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27. Find out the Quartile deviation of a symmetrical distribution having $Q_1 = 20$ and $Q_2 = 40$

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28. Distinguish between primary and secondary data.

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29. State and prove Cauchy-Schwartz inequality.

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30. Define Pearson's 2nd measure of skewness (SK_2). Prove that $-3 \leq Sk_2 \leq 3$.

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31. Describe the different parts of a table.

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32. Derive the median formula for a continuous frequency distribution.

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33. Distinguish between striated muscle and smooth mucle

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34. For three values a, (a+b)/2 and b(> a) find the value of range/sd.

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35. In a certain distribution of the first three moments about the value 4 of a variable are 1, 4 and 10 respectively. Find the three moments about mean and β_1.

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36. Write two uses of ogive.

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37. Write the objective of classification.

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38. Prove that the s.d. can not be smaller than mean deviation about mean.

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39. Prove that $\frac{1}{n}\sum_{E_1}^{n}|x_i - A|$ attains, minimum when A = Median.

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40. If s and R are respectively the standard deviation and range of set of n values of a variable x, then prove that $\frac{R^2}{2n} \leq s^2$.

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41. Write a general formula expressing central moments in terms of raw moments.

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42. If y = f(x) be monotonically increasing (or decreasing) function of x, then median of y is given by $\bar{y} = f(\bar{x})$ when $\bar{x}$ and $\bar{y}$ denote respectively the median of x and y.

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43. Explain how would construct a cost of living index number (C.L.I)?

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44. In a frequency table, the upper boundary of each class-interval has a constant ratio to the lower boundary. Show that the geometric mean (G) may be expressed as $\log G = A + \frac{k}{n} \sum_{i=1}^{r} f_i(i-1).$

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