MATHS

BOOKS - SURA MATHS (TAMIL ENGLISH)

CREATIVE QUESTION SET

Multiple Choice Question

1. If $n(A \times B) = 20$ and $n(A) = 5$ then $n(B) =$

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2. A relation which contains no element is called a ___.

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3. If $f(x) = 2x - x^2$ then find the value of f(1)=____.

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4. If $f(x) = 2x + 1$ and $g(x) = x^2 - 2$ then find gof____.

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5. Let $A = \{0, 1\}$ and $B = \{0, 1\}$ then $A \times B$=

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6. If $n(A) = p$ and $n(B) = q$ then $n(A \times B)$____.

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7. A curve drawn in a graph represents a function, if every ____ line intersects the curve in at most one point.

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8. If a function $f: A \to B$ is both one-one and onto then f is called a____.

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9. Let

$X = \{1, 2, 3, 4\}$ and $Y = \{2, 4, 6, 8, 10\}$ and $R = \{(1, 2), (2, 4), (3, 6), (4$

. Find the range =____.

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10. The difference between relation and function is ____.

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11. The HCF of numbers of the form 2^m and 3^n is ____.

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12. If G.P if $t_1 = \frac{1}{5}$ and $t_2 = \frac{1}{25}$ then the common ratio is ___.

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13. If first term=a, common ratio=r then find the value of $t_{27} =$ _ _.

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14. $1 + 2 + 3 + \ldots. + 55$=_____.

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15. Find the next term of the sequence $\frac{1}{2}, \frac{1}{6}, \frac{1}{10}, \frac{1}{14}, \_\_\_\_\_$.

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16. Sum of n-terms of a G.P. is ___.

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17. $1^2 + 2^2 + 3^2 + \ldots + 19^2 =$ _ _ .

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18. The average of first 100 natural number is ___.

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19. The numbers of the form a, a+d, a+2d, a+3d_____ is said to form___.

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20. Who is the " Father of Geometry"?

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21. If a and b are any two integers then there exists unique integers q and r such that _____ where $o \leq r \leq |b|$.

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22. A linear equation in three variables of the form $ax + by + cz + d = 0$ represents a ____.

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23. $\sqrt{361x^4y^2} =$ _ _

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24. A square matrix, all of whose elements except those in the leading diagonal are zero is called a ___ matrix.

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25. If the graph of the given equation does not intersect the x-axis at any point then the given equation has ____.

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26. What is the value of x in $3\sqrt{x} = 9$?

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27. $xy - 7 = 3$ is not linear equation in two variables since the terms xy is of degree=___.

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28. Who is the "father of algebra"?

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29. The LCM of $8x^4y^2$, $48x^2y^4$ is _____.

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30. If a polynomial is a perfect square then its factors will be repeated ____ number of times.

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31. If the order of A is 4×3 and order of B is 3×2 then the order of the product AB=____.

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32. If $A = \left[(1, 3), \left(\sqrt{2}\right), 5\right), \left(\frac{1}{2}, 4\right)\right]$ then find a_{32}.

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33. If $A = \begin{bmatrix} 1 & -1 \\ -1 & 1 \end{bmatrix}$ and $B = \begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix}$ then AB=____.

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34. For the given matrix $A = \begin{bmatrix} 1 & 3 & 5 & 7 \\ 2 & 4 & 6 & 8 \\ 9 & 11 & 13 & 15 \end{bmatrix}$ the order of the matrix A^T is

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35. A straight line drawn ___ to a side of a triangle divides the order two sides proportionality.

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36. __ is the longest side of the right angled triangle.

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37. A straight line that touches a circle at a common point is called a __.

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38. Ceva's theorem formula=___.

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39. If a line touches the given circle at only one point then its called___.

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40. In a right triangle the sum of the other two angles is ____.

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41. Thales theorem formula=____.

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42. ABT theorem formula=____.

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43. Pythagoras theorem formula=____.

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44. CSA of a hollow cylinder=___.

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45. CSA of a frustum=___.

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46. Volume of cone=___.

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47. Volume of frustum=___.

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48. The relationship between the height and radius of the hemisphere is ____.

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49. The ratio of following area of a sphere and CSA of hemisphere is ___.

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50. The difference between TSA and CSA of hemisphere is _____.

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51. The difference between the C.S.A and TSA of a right circular cylinder is ___.

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52. CSA of a right circular cylinder___

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53. In a right circular cone the axis is ____ to the diameter..

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54. TSA of hemisphere____.

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55. If the value of discriminant $\Delta < 0$ then the nature of root is _____.

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56. Three Non-zero numbers a, b and c will be in G.P. If and only if ____.

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57. Three numbers a, b and c will be in A.P. if and only if ____.

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58. The next term of the sequences $\frac{3}{16}, \frac{1}{8}, \frac{1}{12}, \frac{1}{18}, \ldots$

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59. $\frac{x^3}{9y^2} \times \frac{27y}{x^5}$=____.

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60. Find the element in second row and third column of the matrix $\begin{bmatrix} 1 & -2 & 3 \\ 2 & 1 & 5 \end{bmatrix}$ is _____.

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61. Who is the "Father of Trigonometry"?

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62. $\cos 60^\circ$ =___.

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63. $\tan 45^\circ$ =____.

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64. $1 + \cot^2 \theta =$ ____.

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65. $\sin^2 A + \cos^2 A =$ ____.

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66. The number of trigonometry ratio is _____.

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67. In $\tan\theta = \cot\theta$ then the value of θ is ____.

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68. $co60^\circ \sin 30^\circ + \cos 30^\circ \sin 60^\circ$ =___.

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69. The ___ is an angle formed by the line of sight with the horizontal when the point is below the horizontal level.

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70. $\sin 45^\circ$ =___.

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71. The line drawn from the eye of an observe to the point of object is ____.

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72. The angle of elevation ____ as we move towards the foot of the vertical object.

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73. $(1 + \cos A \sin A) - (1 - \cos A \sin A) =$ ___.

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74. What is the value of $\sqrt{3}$___.

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75. When the line of sight is above the horizontal level the angle formed is ____.

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76. $\cot 60^\circ$ =____.

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77. $(\sec\theta + \tan\theta)(\sec\theta - \tan\theta)$=___.

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78. $\cos 30^\circ$ =___.

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79. If the sm of 10 data values is 265 then their mean is ___.

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80. If the variance is 0.49 then the standard deviation is ___.

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81. When the standard deviation is divided by the mean we get___.

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82. The range of first 10 prime numbers is ____.

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83. If A and B are mutually exclusive events then $P(A \cap B) =$ ___.

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84. $P(A \cup B) + P(A \cap B) =$ ____.

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85. The set of all possible outcomes is called____.

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86. If $P(A \cap B) = 0.3$, $P(\overline{A} \cap B) = 0.45$ then $P(B) =$ ___.

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87. Probability of sure event is _____.

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88. An experiment in which a particular out comes cannot be predicted is called___.

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89. If the sum and mean of a data are 407 and 11 respectively, then the number of observations in the height is ___.

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90. The range of a set of data is 13.67 and the largest value is 70.08 then the smallest value of _____.

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91. The range of 25, 67, 48, 53, 18, 39, 44, is ___.

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92. The S.D of a data is 2.8, if 5 is added to all the data values then the new S.D is ____.

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93. If the mean and S.D of a data are 8 and 2 respectively then the C.V is ____.

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94. The probability of an impossible event is ____.

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95. When two coins are tossed together, the sample space is $S = \{HH, HT, TH, \top\}$ then n(S)=____.

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96. The inclination of x-axis and everyline parallel to X-axis is ___.

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97. $A(0, 4), B(5, 0)$ and $C(-4, -7)$ are vertices of a triangle then its centroid will be at____.

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98. Two non-vertical line with slopes m_1 and m_2 are perpendicular if and only if $m_1 \times m_2$=___.

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99. A line with slope (m) and y-intercept (c) can be expressed through the equation =_____.

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100. Slope of the straight line is ____.

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101. If $\theta = 180^\circ$ then the slop of the line parallel to the negative direction of _____.

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102. The equation of y-axis is ___.

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103. Find the equation of a line passing through the point(3, -4) and slope $\left(\frac{-5}{7}\right)$ is ___.

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104. Two straight line are parallels if and only if their slopes are ____.

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105. What is the slope of the line whose inclination is 30°?

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106. What is the slope of line whose inclination 60° is___.

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107. Heron's formula=___.

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108. If three point $A(x_1, y_1), B(x_2, y_2)$ and $C(x_3, y_3)$ will be collinear then the area of $\triangle ABC =$ ___.

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109. The inclination of y-axis and everyline parallel to y-axis is ___.

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110. The line segment joining the mid-points of two sides of triangles is parallel to the third side and is equal to ___ of its length.

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111. The difference between the CSA and TSA of a cone is ___.

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112. The difference between TSA and CSA of hemisphere is _____.

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113. The centre of a great circle is at the ____ of a sphere.

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114. The ratio of following area of a sphere and CSA of hemisphere is ___.

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115. Volume of cylinder=___ cu.units

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116. The relationship between the height and radius of the hemisphere is ____.

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117. Volume of cylinder=___ cu.units

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118. A section of the sphere by a plane through any of its great circle is ____.

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119. ___ is a solid generated by the revolution of a semicircle about its diameter as axis.

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120. Volume of frustum=___.

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