STANDARD X ONE MARK QUESTIONS AND ANSWERS.

1. In an A.P if tn = 4n + 5 then the common difference is **4.**

2. Volume of sphere of radius 1cm is **4/3 cu.cm**.

3. G.C.D of x^5 , x^7,$x^{10}$is**x^5**

4. Square root of 16 x ^{2} y^4 z^8 is   **4 x y^{2}z^4**

5. Angle in major segment is **acute angle**.

6. If one angle of cyclic quadrilateral is 50^0, then the angle opposite to is 130^0

7. Slope of 2x = y is **2**

8. Area of a triangle whose vertices are (0,0), (1,0), (0,1) is **½ sq.units**.

9. The angle of elevation of the top of the tower at a distance of 100 m is 45^0, and then the height of the tower is**100m**.

10. The sum of 1+3+5+…. + 20 terms is **400**

11. The common ratio of the G.P is 3,6,12,24,…. Is **2**

12. The square root of 36 a^8 = **6a^4**

13. When x^3+ x^2 + 5 is divide by (x-1), then the remainder is**7**

14. The number of tangents drawn to the circle at any point on the circle is **1**

15. The length of the diagonal of the square is 42 cm, then the length of the side is**4cm**

16. The midpoint of the line segment joining the point(3,5) , (1,3), is**(2,4)**

17. The equation of st.line passing through (2,-3) ,is parallel to X axis is   **y = -3 (or) y - 3= 0**

18. If sin ⍰ = 3/2 then the value of ⍰=**60^0**

19. The sum of first n natural number is 10 . the sum of their cubes is **100**

20. Square root of 9 x ^{2} + 30 x + 25 is **3x + 5**

21. In a cyclic quadrilateralABCD m<A = 5x ,m<C = 5x the value of x is **20^0**

22. The tangents at the ends of a diameter are**parallel**

23. The center of a circle is (-6,4), a diameter of the circle has its one end at the origin ,then other end at the diameter is**(-12, 8)**

24. If the straight line 7x – 5y = k pass through the point (1,1) then **k= 2**

25. If the equal of cos⍰ = ½ then the value of tan ⍰ =**1**

26. If the sum of 1+2+3+……+10 is 55, then the sum of 1^3 + 2^3+ ……+ 10^3 is **3025**

27. The common ratio of the G.P 64 , 16 ,4 , ….. is **4**

28. If (ax +b) divides P(x) then remainder is**p(-b/a)**

29. The nature of roots of the equation x^2– 9 = 0 is **real , unreal**

30. The angle in the semi-circle is **90^0**

31. If a line drawn parallel to one side of a triangle and divides the other two sides in **same ratio**

32. If the two straight line are perpendicular then m1 x m2 =**-1**

33. If sin ▢ = tan ▢, then the value of ▢ is**0^0**

34. The common difference of an A.P 3 , 1, -1 , -3 , is **-2**

35. The value of 1 + 2+ 3+ …+20 is**210**

36. The solution set of (x – 5) (x + 2) is **{ 5 , -2}**

37. The slope of the line 3x+2y = 5 is**3/2**

38. ▢The equation of the line with slope 5 and passes through origin is**y= 5x**

39. If tan ▢o =3,thenthe value of ▢=**60^0**

40. GCD of a^m, a^{m+1}, a^{m+2} is **a^m**

41. If the roots are imaginary then the value of b^2 -4ac is **<0**

42. If 7 and 24 are the two sides of a right angled triangle , then the hypotenuse is **25**

43. The angle of depression of a stone from the top of a building is 30^0. The angle of elevation of the top of the building from the stone is**30^0**

44. If a_n = 5n – 4 then a_5 = **21**

45. $\dfrac{x}{2-x}$ - -$\dfrac{2}{2-x}$ = **-1**

46. the number of tangents that can be drawn from a point outside the circle is **2**

47. slope of 2y = 3x is**3/2**

48. GC D od 3 a^2 b and 15 a b^2 is**3ab**Type equation here.

49. The term that has to be added to x^2 + 16x to make it a perfect square is **64**

50. 1 – tan 45° =**0**

51. Area of a triangle whose vertices are (0,0) , (2,0) and (0,2) is **2 sq. units**

52. If a_n = $(-1)^n$. n then a^5 =**-5**

53. If a is G.P 3 ,6 ,12 ,… then t_8 = **384**

54. $\dfrac{x}{x+y}$+$\dfrac{y}{x+y}$= **1**Type equation here.

55. The ratio of the corresponding sides of a similar triangle is 2:5 , then the ratio of their area is **4:25**

56. If sin▢ = 0.5 , then ▢ = **30^0**

57. The intersecting point of x+ y = 8 and x – y = 2 is**(5,3)**

58. The equation of a line parallel to Y axis and pass through (5,4) is**x = 5**

59. If sin A = cos A then A is**45^0**

60. If the roots are equal, then the value of b^2 – 4ac is**0**

61. The angles in the same segments are **equal**

62. The factors of P(x) is (x – a), then P(a) is **0**

63. The equation of Y axis is**X = 0**

64. The height of the wall is 5cm. the inclination of the sun is 45^0, then the length of the shadow is **5cm**

65. In an A.P the first term is 18 and the common difference is -4. The 5th term is **2**

66. The sum of $1^2 + 2^2 + 3^2 + \ldots + 10^2 =$**385**

67. The G C D of $3a^4$,$9a^6$,$12a^7$ is **$3a^4$**

68. The two circles od\f diameters of 12cm and 10cm touch each other internally, then the distance between their centers is **1cm**

69. The slope of the line parallel to 2x – 3y – 5 = 0 is**2/3**

70. The centroid of a triangle with vertices (2, -3) , (5, -5), (5, 2) is **(4 , -2**)

71. The length of a shadow of a pole is ,3 times of its height then the angle of elevation is**30^0**

72. If sin ⍬= √3/2 then cos⍬ =**30^0**

73. 2 + 3+ 4+…..+10 =**54**

74. The solution set of x2 – 3x = 0 & x(x-3) =0 is**{0,3}**

75. The Y – intercepts of the line y = 2x is**0**

76. If sin ⍬ = cos⍬ then tan ⍬= **0**

77. If 2 + 4 = 6 ….+ 2n =**n(n+1)**

78. The sum of the G.P a+ ar + ar^2 + …….is **a/1-r**

79. The L C M of $^{Pm-1}$, p^m, $^{pm+1}$ is **pm+1**

80. The nature of roots of the equation x^2 + 4 = 0 is **unreal**

81. The x and y intercepts of the line 4x + 3y – 12 = 0 is (**3,4)**

82. $\sum_{n=2}^{6} n - 1 =$**15.**

83. $\sum_{d=0}^{5} d + 5 =$ **45.**

84. $\sum_{k=1}^{10} 3 =$ **30**

85. $\sum_{k=1}^{n}$ $K^3 =$ **(K)²**

86. 1+3+5+….20 terms = **400.**

87. If 1+2+3+…+P = 171 then $1^3 + 2^3 + 3^3 + \ldots + P^3 =$ **171².**

88. -1<r<1then a+ar+ar^2+…..+ar^n+….. = $\frac{a}{1-r}$

89. The sum of 75 positive integers is 2850.

90. The sum of interior angles of a polygon is **(n-1)180°**

91. 0.12,0.24,0.48,…… of a G.P is **2**

92. $\frac{a}{r3}, \frac{a}{r}$,ar,$ar^3$….. of G.P is r**2.**

93. m-3d,m-d,m+d,m=3d of an A.P is **$2d$**

94. in an A.P ,t_n=4n+5 then common difference is **4**

95. $1+3+5+\ldots+l=(\frac{l+1}{2})^2$

96. $1+3+5+\ldots$ n terms=n^2

97. If $a_n=\frac{1+(-1)n}{n}$ then a_4 is $\frac{1}{2}$.

98. If a,b,c is lies in an A.P then b $=\frac{a+c}{2}$

99. If $\sum n^3 = 3025$ then $\sum n$ =**55.**

100. $2+4+6+\ldots+2n$ =**n(n+1).**

101. $1+8+27+\ldots+1000$ =**3025.**

102. $1+2+3+\ldots+10$ = **55.**

103.   (x-5)(x+2) =0 then its solutions are **{5,-2}.**

104.   If we divide p(x) by ax+b then the remainder is **p($\frac{-b}{a}$).**

105.   If the roots of a quadratic equation are imaginary then b^2-4ac is **< 0.**

106.   The square root of $36a^8$ = **$6a^4$.**

107.   The value of $\frac{x}{x+y} + \frac{y}{x+y}$= **1.**

108.   If we divide x^3+x^2-7x-3 by x-3 then the quotient is **x^2+4x+5.**

109.   If we divide x^3+x^2-3x+5 by (x-1) then the remainder is **4.**

110.   The quadratic equation with its roots 3+7, 3-7 is x2-6x=2 = **0.**

111.   Simplify: $\frac{x3}{x-2} +\frac{8}{2-x}$ = **x^2 +2x+4.**

112.   The G.C.D of 15 $x^4 y^3 z^5$; 12 $x^2 y^7 z^2$ is **$3x^2y^3z^2$.**

113.   The line joining A(-3,4),B(2,5) meets Y axis at Q ,then the ratio of Q is **3:2.**

114.   The slope of a line parallel to Y axis is **0.**

115.   The line 4x+3y-12 = 0 meets at X axis at **(3,0).**

116.   The line passes through origin and parallel to 2x + 3y-7 = 0 is $2x + 3y = 0$.

117.   If A(x_1,y_1), B(x_2,y_2) and C(x_3,y_3) are lie in a straight line then the area ofΔABC is **0.**

118.   Which following line goes through origin 3y=2x; x+y+2 = 0; x-2y+1 =0 is $3y = 2x$.

119.   If $a_1x + b_1y + c_1$ =0 and a_2x+ b_2y + c_2 = 0 are parallel then $\frac{a1}{a2} = \frac{b1}{b2}$is true.

120.   If $a_1x + b_1y + c_1$ =0 and a_2x+ b_2y + c_2 = 0 are perpendicular then **$a_1 a_2 + b_1 b_2 = 0$** is true.

121.   The equation of a line which is parallel to 4x + 3y-2 = 0 is **4x + 3y + k = 0.**

122.   The equation of a line which is perpendicular to 4x + 3y − 2 =0 is **3x − 4y + k = 0.**

123.   The area of a triangle having its vertices as (0,0),(1,0), (0,1) is **½ sq.units.**

124.   The center of a circle is (-6,4), and its one end of diameter is origin ,
            then its other end is **(-12,8).**

125.   If two straight lines are perpendicular then m_1xm_2 = **-1 is true.**

126.   In a triangle the centroid divides each median by the ratio **2:1**

127.   The area of a triangle is **½ x_1 ($y_2 - y_3$) .**

128.   The equation of X axis is **Y = 0.**

129.   The equation of Y axis is **X = 0.**

130.   The equation of a line parallel to X axis is **Y = c.**

131.   The equation of a line parallel to Y axis is **X = c.**

132.   If two lines are parallel to each other,then **$m_1 = m_2$.**

133.   If a slope of a line is 1 , then the slope of its parallel line is **1.**

134. If the slope of a line is 1, then the slope of its perpendicular line is **-1**

135. The point in which the line 6x – 3y – 30 =0 meets Y axis is **(0, -10).**

136. The point in which the line 6x – 3y – 30 =0 meets X axis is (5, 0).

137. The point which divides the angle bisectors of a triangle is called as In Centre.

138. The point in which every perpendicular bisectors of each sides of a triangle is called as CircumCentre.

139. The point in which every altitudes of a triangle meets at a point is called as Ortho center.

140. Slope of X axis is ∞

141. Slope of Y axis is 0.

142. A line which makes slope with X axis at 45° is 1.

143. The lines x = -4 and y = 0 intersects at a point is (-4,0).

144. The lines y = 0 and x = 3 intersects at a point is (3,0).

145. The line Y = 5 is parallel to X axis.

146. The ratio of area of similar triangles is 9:25 then the ratio of its square of sides is 9:25

147. The ratio of sides of similar triangles is 2:3 then its ratio of perimeter is 2:3

148. The ratio of perpendiculars of similar triangles is 6:5 then its ratio of areas is 36:25

149. The ratio of sides of similar triangles is 8:9 then its ratio of perpendiculars is 8:9

150. In ABC, D is a point on BC, if BD=4cm and DC=9cm then AD = 6

151. The distance between the centers of two circles with diameters 12cm and 10cm touches inside is 1cm

152. If two circles touches outside with radii 3cm and 2cm then distance between the centers is 5cm

153. Father of geometry is Euclid

154. Two chords are intersect inside the circle then the area formed with the segment of one chord is 9cm then the area formed by the segment of the other chord is also 9cm.

155. The number of tangents drowned from a point outside the circle is 2

156. $\frac{\sqrt{cosec^2 15°-1}}{cosec 15°}$ = cos 15°

157. $Cosec^2\theta - \frac{1}{tan^2\theta}$ = 1

158. $\frac{tan^2\theta}{sec\theta+1}$ + 1 =sec $\theta - 1$

159. Cos A = ½ then $\sin^2 A + \cos^2 A$ =1

160. The length of the shadow of a tower with height 10m when the angle of elevation of the sun 45° is 10m

161. Tanθ + cot θ = 2 then $\tan^2\theta + \cot^2\theta$ is 2

162. $1 – \tan^2 60°$ is -2

163. $\frac{\sqrt{1-\sin^2\theta}}{\sin\theta}$ = tan θ

164. Sec $\theta \sqrt{1-\sin^2\theta}$ = 1

165. If θ = 90° then $1 – \sin^2\theta$ is 0