BRINDHAVAN HR SEC SCHOOL,SUKKIRANPATTI ,PATTUKKOTTAI

COMPULSORY CREATIVE 2MARKS AND 5 MARKS (EXPECT THE QUESTIONS)

1. Find the HCF of (a) 12,20 (b) 16,24 (c) 11,9

2. Find the HCF of (i) 90,15 (ii) 80,25 (iii) 40,16 (iv) 23,12 (v) 93,13

3. Find the 4-digit pin number 'pqrs' of an ATM card such that $p^2 \times q^1 \times r^4 \times s^3 = 3,15,000$?

4. What is the sum of first n odd natural numbers?

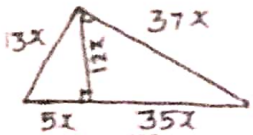
5. What is the sum of first n even natural numbers?

6. How many squares are there in a standard chess board?

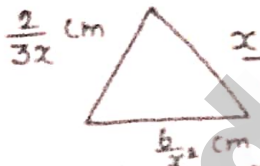
7. How many rectangles are there in a standard chess board?

8. The length of a rectangular garden is the sum of a number and its reciprocal. The breadth is the difference of the square of the same number and its reciprocal. Find the length, breadth and the ratio of the length to the breadth of the rectangle.

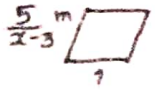
9. Find the ratio of the perimeter to the area of the given triangle.



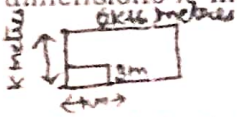
10. Write an expression that represents the perimeter of the figure and simplify.



11. Find the base of the given parallelogram whose perimeter is $\frac{4x^2+10x-50}{(x-3)(x+5)}$



12. Consider a rectangular garden in front of a house, whose dimensions are $(2k+6)$ metre and k metre. A smaller rectangular portion of the garden of dimensions k metre and 3 metres is leveled. Find the area of the garden, not leveled.



13. When the height of the building and distances from the foot of the building is given, which trigonometric ratio is used to find the angle of elevation?

14. If the line of sight and angle of elevation is given, then which trigonometric ratio is used (i) to find the height of the building (ii) to find the distance from the foot of the building.

16. A cone, a hemisphere and a cylinder have equal bases. The heights of the cone and cylinder are equal and are same as the common radius.Find the ratio of their volumes

17. T.S.A of a hemisphere is equal to how many times the area of its base?

18. Find the value of the radius of a sphere whose surface area is 36π sq. units.

19. Find surface area of a cone in terms of its radius when height is equal to radius.

20. When the radius of a cylinder is double its height, find the relation between its C.S.A. and base area.

21. Two circular cylinders are formed by rolling two rectangular aluminum sheets each of dimensions 12 m length and 5 m breadth, one by rolling along its length and the other along its width. Find the ratio of their curved surface areas.

22. There are two cones with equal volumes. What will be the ratio of their radius and height?

23. Find the Standard deviation of the first n natural numbers.

23. What will be the probability that a non-leap year will have 53 Saturdays?

24. If the line of sight and angle of elevation is given, then which trigonometric ratio is used (i) to find the height of the building (ii) to find the distance from the foot of the building.

25. What will be the probability that a nonleap year will have 53 Saturdays?

26. Find the sum of all 3 digit natural numbers, which are divisible by 8.

27. Find the sum of all 3 digit natural numbers, which are divisible by 9

28. Find the sum of all natural numbers between 300 and 500 which are divisible by 11.

29. The base of a triangle is 4 cm longer than its altitude. If the area of the triangle is 48 sq. cm, then find its base and altitude

30. Find the equations of the straight lines each passing through the point (6, -2) and whose sum of the intercepts is 5.

31. Find the equation of the line passing through (22, -6) and having intercept on x-axis exceeds the intercept on y-axis by 5

32. A straight line cuts the coordinate axes at A and B. If the midpoint of AB is (3, 2), then find the equation of AB.