Holiday homework

 Winter break

1) Factorise:-

* 27-125a2-135a+225a2
* 27p3-1/216-9/2+1/4

2) Factorise :- 27x3+y3+z3-9xyz

3) Verify that:-x3+y3+z3-3xyz=1/2(x+y+z){(x-y)2+(y-z)2+(z-x)2

4) if x+y+z=0,show that x3+y3+z3=3xyz

5) Without actually calculating the cubes find the value of each of the following

i) (-12)3+73+53 ii) (28)3+(-15)3+(-13)3

6) In which quadrant or axis the following point lie.

i) (2,3) ii) (-3,5) ii) (-2,-3) iv) (5,-3) v) (3,0) vi) (0,2)

7) Write down the coordinate of i) x-axis ii) y-axis iii) orgin.

8) write any four solution of each of the following each.

i) 2x+y=7 ii) x=4y iii) 2x+3y=12

9) Write all postulate given by enclid.

10) prove that if two line intersect each other then vertically opposite angle.

11) State and prove ASA congruence rule .

12) State and prove mid point theorem .

13) Prove that angle opposite to equal side of a triangle are equal .

14) Prove the side opposite to equal angle of a triangle are equal .

15) Write all the five congruence rule and explain with examples.

16) Prove that diagonal of a llgm divides it into congruent triangle.

17) Prove that angle subtended by an arc at the centre is dereble the angle subtended by it at any point on the remaning part of the circle .

18) prove that equal chords of a circle subtend equal angle at the centre .

19) prove that the quadriletral formed by the interval angle bisector of any quariletral is cyclic.

20) Prove that cyclic parallelogram is rectangle.

**WINTER BREAK HOLIDAYS HOMEWORK (2023-24)**

**Class VIII**

**MATHS**

* Revise the chapter related to PT -2

**Solve all the following questions in Maths Fair Notebook neatly and properly :**

Q1 The shape of a garden is rectangular in the middle and semi circular at the ends as shown in the diagram. Find the area and the perimeter of this garden [Length of rectangle is 20 – (3.5 + 3.5) metres].

 7M

20M

Q2 Find the area of a rhombus whose side is 5 cm and whose altitude is 4.8 cm. If one of its diagonals is 8 cm long, find the length of the other diagonal.

Q3 The floor of a building consists of 3000 tiles which are rhombus shaped and each of its diagonals are 45 cm and 30 cm in length. Find the total cost of polishing the floor, if the cost per $m^{2}$ is RS.4.

Q4 Find the side of a cube whose surface area is 600 c$m^{2}$

Q5 The lateral surface area of a hollow cylinder is 4224 c$m^{2}$ . It is cut along its height and formed a rectangular sheet of width 33 cm. Find the perimeter of rectangular sheet?

Q6 Find the height of a cuboid whose base area is 180 c$m^{2}$ and volume is 900 c$m^{3}$?

Q7 A cuboid is of dimensions 60 cm × 54 cm × 30 cm. How many small cubes with side 6 cm can be placed in the given cuboid?

Q8 Find the value of m for which $5^{m}$ ÷$5^{-3}$= $5^{5}$ .

Q9 Express the following numbers in usual form.

1. 3.02 ×$10^{-6}$
2. 4.5 × $10^{4}$
3. 3 ×$10^{-8}$