Part - I A

(Answer the all questions)

1. If the circumference of a circle is 44cm, find the are length of semicircle.

   ....

2. If the area of a square is $196cm^2$, find the length of a side of square.

   ....

3. Simplify $\frac{3}{4} \times \frac{8}{9} \div \frac{2}{3}$

   ....

4. Fill in the blanks.

   $x^2 + 6x + \ldots\ldots = (x + -)^2$

   ....
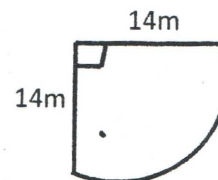
5. Find the equal sides of triangles ABC and 'PQR in which both triangles congruent in the case of side Angle side.

   ....
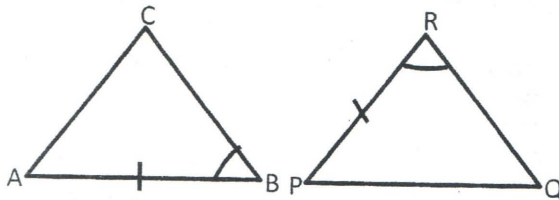
6. Find the area of the sector given in the diagram.

   ....

7. Factorize

   $25x^2 - 9$ ....

8. According to the given data, find 'x' and 'y'

   ....
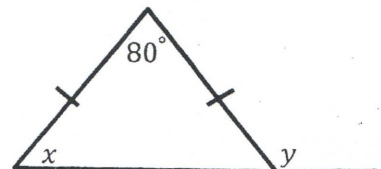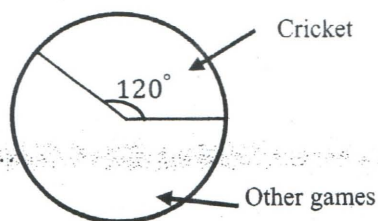

9. Five men can complete a work in 8 days. find,

   How many days will be taken to complete the same work by 4 men?

   ....

10. In the given pie chart, 24 students play cricket.

    Find the total number of students in the class room.

    ....

11. The monthly electric charge of a certain household is Rs. 4000. If the VAT charges are 10%, what is the total value of the bill?
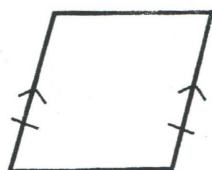
    ....

12. Solve

    $$\frac{10}{x-3} = \frac{5}{8}$$

    ....

13. Find the L.C.M of $4x^2y, \ 8xy^2$

    ....

14. Find the solutions of x

    $x(x + 7) = 0$

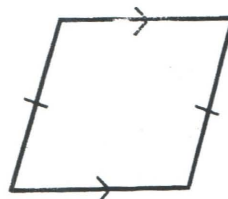   ....

15. From the following quadrilaterals, select the ones which can be concluded to be parallelograms, based on the given information.

    ....
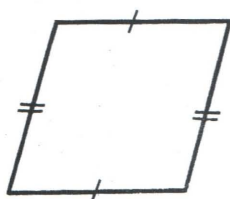
    (1)   (2)   (3)

16. Represent the shaded region by set notation.

    ....
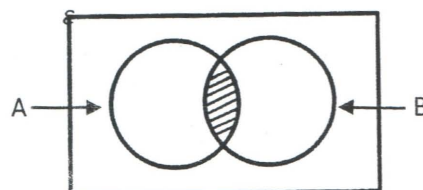
17. If $log_2 128 = x$, Find the value of x.

    ....

18. Find the equation of the straight line passing through the points (3,0), and (0,3)

    ....

19. How far does a motor cycle travel along a road in 1 hour 30 minutes if its speedo meter displays a constant speed of $60kmh^{-1}$ during this period?

....

20. Make 'h' the subject of the formula $V = \frac{1}{3}\overline{\wedge}r^2h$

....

21. If the general term of a number pattern is 3n-4, Find its 12 term.

....

22. Find the value of x and y in the given parallelogram.

....
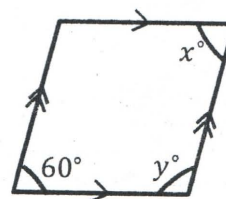
23. In the given triangle,

1) Find the value of x

....

2) Write two sides which are equal in length.

....
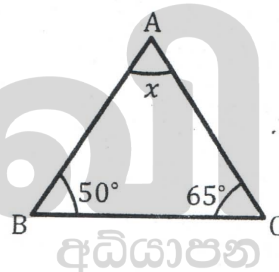
24. If $x = 3$, and $y = -1$ find the value of $x + 2y$

....

25. Find suitable value for the blank box.

$2 : 3 = \boxed{} : 12$

....

(2X25=50marks)

Part - I B

❖ Answer all questions.

01.

1) Simplify $\left(\frac{1}{4} + \frac{1}{3}\right)$ of $2\frac{2}{7}$

....

2) Kanthan sold $\frac{1}{4}$ of land which he had. After that he gave $\frac{1}{3}$ of the remaining land to his daughter. Then he gave $\frac{1}{8}$ of the remaining land to his son. the rest of the land area which he had 35 acres.

1) What fraction of total land remaining after solding?

....   (1 mark)

2) What fraction of total land was given to the daughter?

....   (2 marks)

3) What fraction of total land was given to the son?

....   (2 marks)

4) What fraction of total land was left over?

....   (2 marks)

5) How many acres is the whole part of kanthan's land?

....   (1 mark)

(10 marks)

02.

a)
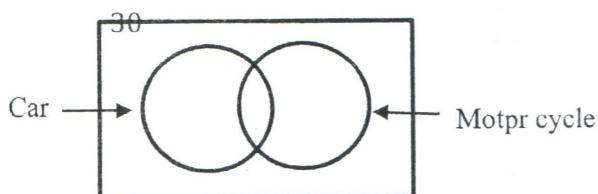
Out of 30 teachers in a school, 15 teachers haven't car or motorcycle 12 teachers have motorcycle. 10 Teachers have only a vehicles.

1) Show that the given data in a Venn diagram,   (4 marks)

2) Find the number of teachers who have both car and motor bike?

....   (2 marks)

3) Howmony teachers have atleast one of the above vehicle?

....   (2 marks)

b) There are 4 red marbles 3 green marbles and 2 white marbles in a vessel. A marbel is taken randomly from the vessel. Find the probability of taking green?

.... (2 marks)

03. a) The first Rs. 100, 000 of the annual income of a businessman is exempted from income tax. An annual income tax of 3% is charged next Rs. 100 000 then an annual income tax 4% is charged next Rs. 100 000.
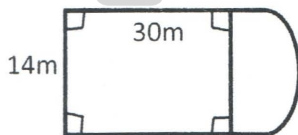
    1) Calculate the income tax of Rs. 150 000?

    ....

    2) Calculate the income tax of Rs. 225 000?

    ....

    3) If a businessman paid an annual income tax of Rs. 5000, find his annual income?

    ....

b) It the quarter value of the assessment tan of a house was Rs 150 when its annual value was assessed as Rs 20, 000, then what is the interest rate the urban council charged?

....

(10 marks)

04.

Then diagram shows a land consisting of a rectangular part of land and a semicircular flower bed.

    1) Find the radias of the flower bed?

    ....

    2) Find the area of the flower bed?

    ....

    3) If you decide to plant grass in rectangular portion, calculate the total cost to plant grass. (The cost of planting grass for $1 m^2$ is $Rs. 150$)

    ....

    4) If you decide to make steel wire fence with 4 lines around the land, find the total length of steel wire that you need?

    ....

(10 marks)

05. The pi – chart shows about the number of students who learned
From Grade 1 – 13 in a school.

1) Find the magnitude of x

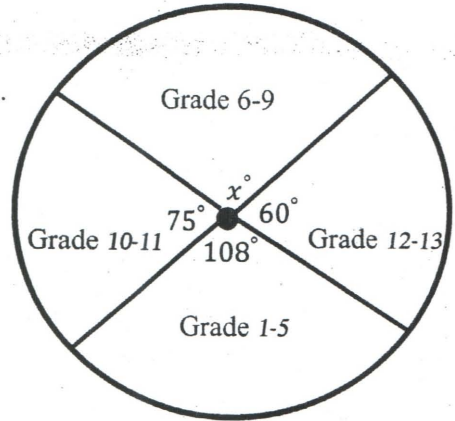...

2) If the students who learned in Grade 10 – 11 is 10
morethanthe students who learned in Grade 12 – 13,
find the total Number of students whe learned all grades?

....

3) If 25% of Grade 12 – 13 students are girls, find the number
of boys In that grade?

....

(10 marks)