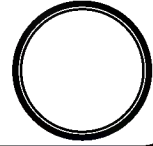




யா/ஹாட்லிக் கல்லூரி, பருத்தித்துறை.
J/ Hartley College, Point Pedro.



முதலாம் தவணைப் பரீட்சை – 2020 – தரம் 08
First Term Examination – 2020 – Grade 08

கணிதம் I, II
Mathematics I, II

32

T

I, II

இரண்டு மணித்தியாலம்
Two Hours

கட்டெண்
Index No

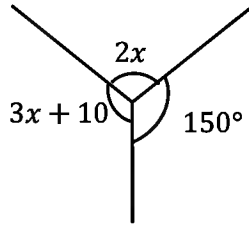
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Mathematics

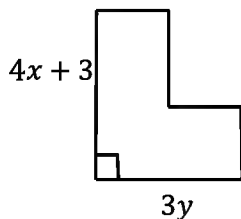
Part – I

Answer all questions.

- Write the 7th multiple of 5
- Simplify $\frac{(+2) \times (-6)}{(-3)}$
- Remove the brackets and simplify
 $2(3x - y + 5) + 3y$
- Find the value.
 $\sqrt{27 \times 12}$
- Express the answer in metric ton and kilogram
 $7t - 200Kg - 1t50g$
- Find the value of x



- Find H.C.F of 16, 36 and 72.
- For a dodecahedron
 - What is the shape of one face?
 - What is the number of edges?
- What is the supplementary angles of 89°
- Remove brackets $3x(2x - 3)$
- Write in words $\frac{x}{3} + 4$
- Find the perimeter of the given figure.



13. Write in ascending order

$$\frac{3}{7}, \frac{1}{2}, \frac{3}{4}, \frac{3}{8}$$

14. Write down two digits that should not be in the one place of a perfect square number.

15. Express as a power of a product $a^3 \times (2b)^3 \times c^3$

16. The area of a square shaped flower bed is $256m^2$. Find the length of a side of it.

17. When $x = 2$ and $y = 3$ find the value of $2x + 3xy$

18. Simplify $1\frac{2}{3} + 2\frac{3}{4}$

19. Find the value $(-1)^3 \times 3^2$

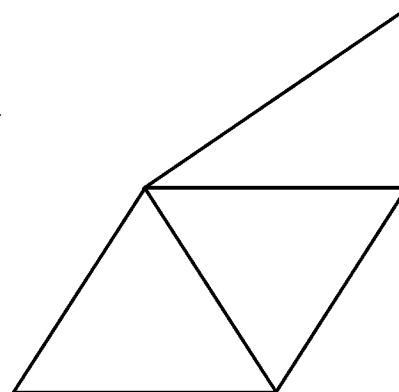
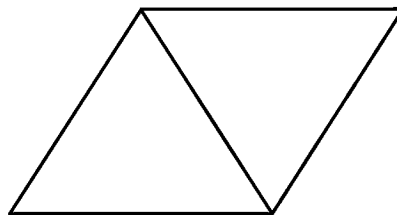
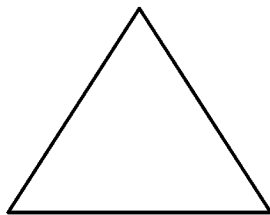
20. How many triangles are there in the given figure?

(20 × 2 = 40 Marks)

Part – II

Answer five questions including the first one.

01. The following figures show how some sticks were arranged



- How many sticks are there in each of the figures?
- Draw the next shape of this pattern.
- Write the first five terms of the number pattern of the number of sticks in this figures.
- What is the general term of this pattern?
- Find the 15th term of this pattern.
- Which term is 373 in the number pattern.
- Find the $(n + 1)^{th}$ term of this pattern.
- Write the 20th triangular number.

(16 Marks)

02.

- Draw a net diagram of an octahedron.
- Write the number of faces vertices and edges of an octahedron.
- Write 4 Plato's solids.
- Write Euler's relationship,
- Using the relationship, find number of vertices of a solid with 20 faces and 30 edges.

(11 Marks)

03.

a) Simplify

i) $(-4) - (+3) - (-7)$

ii) $\frac{(-4) \times (-2) - (-3)}{-6}$

iii) $10x + 4y - 2x - 6y$

b) Remove the brackets and simplify.

i) $3a(2ab - a)$

ii) $a(x + y + 3) + a(x + 3y + 4)$

(11 Marks)

04.

a) Answer the following questions according to the information given in the figure.

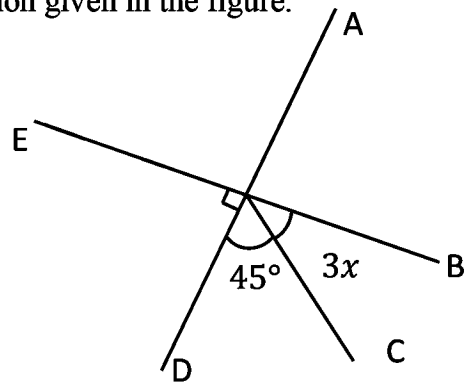
AD and BE are straight line.

i) Name a pair of vertically opposite angles.

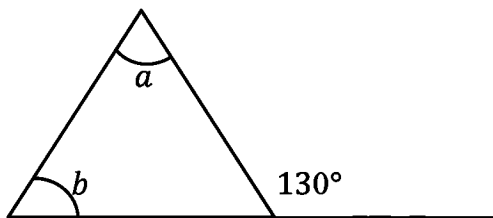
ii) Find the magnitude of x

iii) Name a pair of complimentary angles

iv) Name a pair of supplementary angles



b)



Find the value of $9a + b$

(11 Marks)

05.

i) Express 72 as a product of prime factors and the express it as a product of indices of prime factors.

ii) Find the L.C.M of 12, 18, 20

iii) Simplify

a) $4t23kg - 2t430kg$

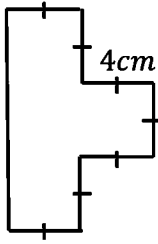
b) $2t40kg \div 3$

c) $3t740kg \times 5$

(11 Marks)

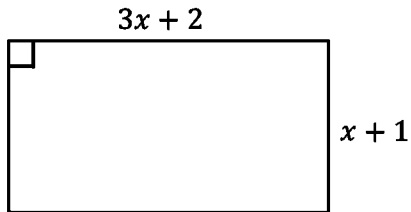
06.

a)



- i) Find the perimeter of the figure.
- ii) Find the area of the figure.

b)



- i) Write the perimeter of the rectangle in the figure as an algebraic expression and give your answer in its simplest form.
- ii) If its perimeter is 78cm , then find the value of x
- iii) Find the length and breadth of the rectangle.
- iv) Find the area of the rectangle.

(11 Marks)