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**

சுட்டெண்
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Mathematics

Part – I

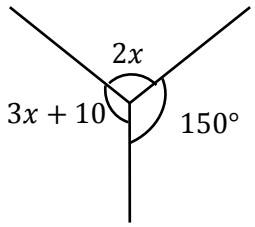
Answer all questions.

1. Write the 7^{th} multiple of 5
2. Simplify $\frac{(+2)\times(-6)}{(-3)}$
3. Remove the brackets and simplify

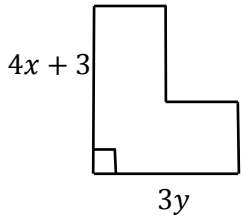
   $2(3x - y + 5) + 3y$
4. Find the value.

   $\sqrt{27 \times 12}$
5. Express the answer in metric ton and kilogram

   $7t - 200Kg - 1t50g$
6. Find the value of x



7. Find H.C.F of 16, 36 and 72.
8. For a dodecahedron
   (i) What is the shape of one face?
   (ii) What is the number of edges?
9. What is the supplementary angles of 89°
10. Remove brackets $3x(2x - 3)$
11. Write in words $\frac{x}{3} + 4$
12. 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 $(-1)^3 \times 3^2$

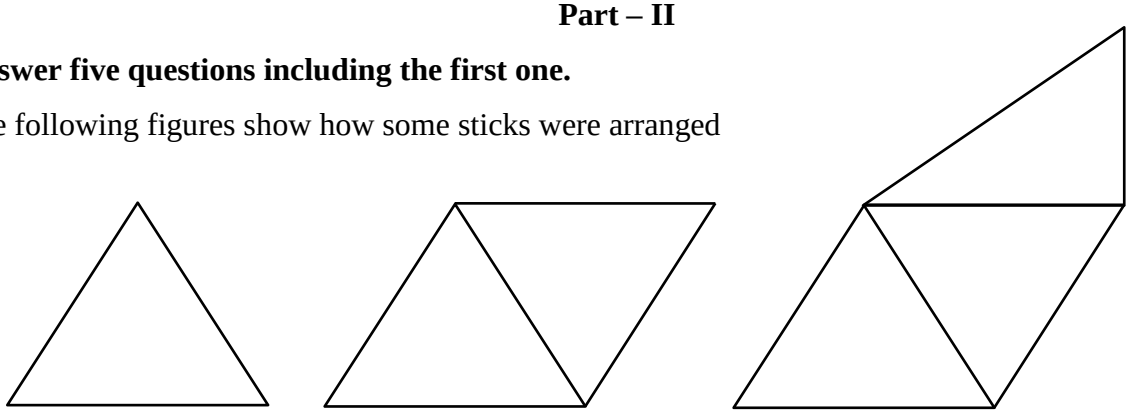
20. How many triangles are there in the given figure?

$(20 \times 2 = 40\ Marks)$

Part – II

Answer five questions including the first one.

01. The following figures show how some sticks were arranged



i) How many sticks are there in each of the figures?

ii) Draw the next shape of this pattern.

iii) Write the first five terms of the number pattern of the number of sticks in this figures.

iv) What is the general term of this pattern?

v) Find the 15^{th} term of this pattern.

vi) Which term is 373 in the number pattern.

vii) Find the $(n+1)^{th}$ term of this pattern.

viii) Write the 20^{th} triangular number.

(16 Marks)

02.

i) Draw a net diagram of an octahedron.

ii) Write the number of faces vertices and edges of an octahedron.

iii) Write 4 Plato's solids.

iv) Write Euler's relationship,

v) 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.

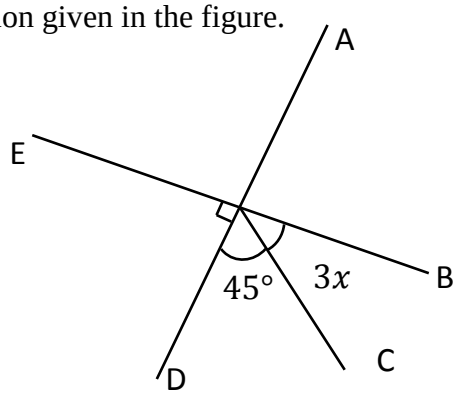
AD and BE are straight line.

i) Name a pair of vertically opposite angles.

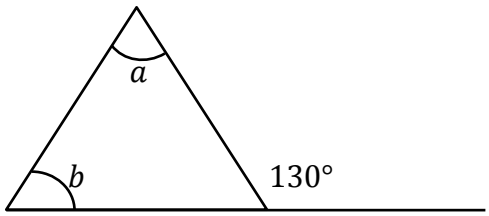
ii) Find the magnitude of x

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) $4t23kg-2t430kg$

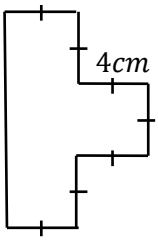
b) $2t40kg\div 3$

c) $3t740kg\times 5$

(11 Marks)

06.

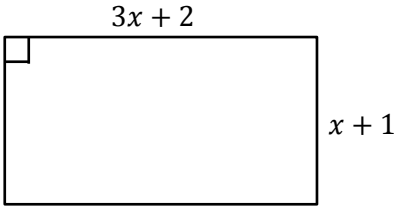
a)



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 it simplest form.

ii) If it's 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)