Mn / Sithyvinayakar Hindu College

(National School – Mannar)

First Term Exam - 2019

Mathematics

Grade -9	Index No - ……	Time – 2 Hour 30 Minutes

Part - 1

- **Answer the all question on this paper it self**

1. Find the $\frac{2}{3}$ of Rs.2400?

2. Consider the following number series 10, 14,18……..
   i) Find the common difference?

   ii) Find the 5^{th} term?

3. Give the 10111_{two} as a decimal number

4. Expand and simplify $(x + 2)(x + 3)$

5. What is the 25 % of one hour in minutes?

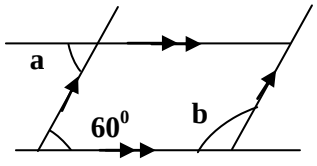
6. Evaluate $5 + 10t - 4u \quad when\ t = 9, u = 5$

7. A toy sold to Rs.120 to get the loss Rs.20

   i) Find the purchasing price by vendor?

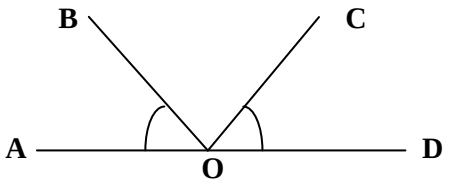
   ii) Find the loss percentage?

8. Find the value of **a** and



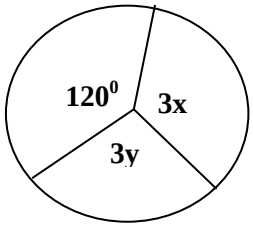
9. Simplify $\left(\frac{1}{2}+\frac{1}{6}\right)\times\frac{3}{4}$

10. If $A\hat{O}B = C\hat{O}D$ Write an angle which is equal to $A\hat{O}B$

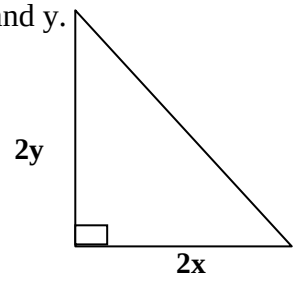


11. Convert 1.5 m^3 in to liter

12. Show that $x + y = 80^0$

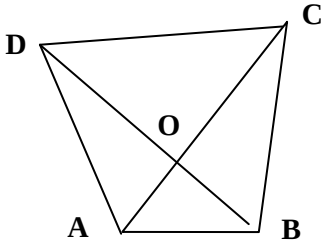


13. Write expression for the area of the shaded region in term of x and y.



14. If the general formula of a series $5n + 2$, Find the 10^{th} term of the series.

15. If the area of ΔABC is equal to the area of ΔABD. Write the another two names of triangles which have equal area?



16. Factorize $x^2 + 7x + 12$

17. If $a + b = 7\ and\ a - b = 2$, Find the value of a^2-b^2

18. M= { A triangle has four side } What is the special name of the set M?

19. Solve the equation $2x - 7 = 5$

20. Consider the distribution

7, 2,2,8,1,6,4

i) Find the mode?

ii) Find the median of the above distribution?

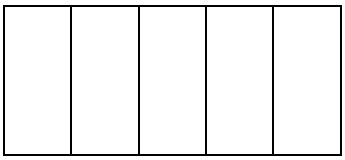
$20 \times 2 = 40\ Marks$

Part - II

Answer any five questions.

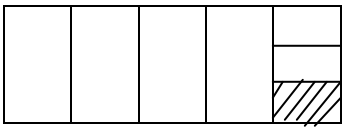
01. a) Raman buys 600g cake for his birthday party.

i) Cut in to 5 equal pieces and reserve one piece for his old friend represents the reserved cake piece of whole in a diagram.



ii) Find the weight of a diagram?

iii) Now remainder each piece cut into three equal piece. Write the fraction of each small piece of whole cake.



iv) Now how many pieces he has and what is weight of each piece?

b) i) Simplify $\frac{1}{2}+\frac{2}{3}$ of $\frac{3}{5}$

ii) If $\frac{2}{7}$ of certain amount is Rs.500. Find the certain amount?

$2+2+2+2+2+2=12\ Marks$

02. Roshan purchased 120 pencils at the rate of Rs.2.00 per pencil. He marked the price for 72 of them at the rate Rs.3.00 per pencil and remaining at the rate of Rs.2.00 per pencil.

i) Find the purchasing price of pencils?

ii) What is the selling price of pencils as he thought?

iii) Does he incur profit or loss?

iv) Find the profit or lost percentage?

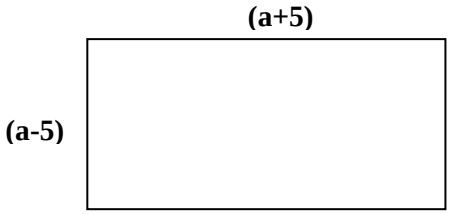
v) Saman purchased from Roshan all pencil as he thought with 5% discount. Find the his net profit of Roshan?

$2+3+1+3+3=12\ Marks$

03. Length of rectangle ABCD is (a+5) and width (a-5)

i) Find the difference between length and with?

ii) Write perimeter in terms of **a**.



iii) Write algebraic expression for its area?

iv) Write the simplified form of algebraic expression in question (iii)

v) If value of $a=10$.Find the area of ABCD

$2+3+2+3+2=12\ MArks$

04. a) Price of a pen RS.15 and price of book is Rs.75

i) Represent these two prices in binary

ii) Find the sum of two binaries in binary format?

iii) Find the difference of the two binaries in binary format?

iv) Write the highest number in decimal that can be presented by 5 binary digit ?

b) Find the mean of the distribution 7.5 ,2, 6.4, 5.6, 7.5

$2 + 3 + 1 + 3 + 3 = 12\ Marks$

05. The general term of a certain number pattern is $7n + 2$

i) Find the first three terms of the number pattern

ii) Find the common difference

iii) Find the 20^{th} and 50^{th} term of the number pattern

iv) Which the term is 93 of above number pattern

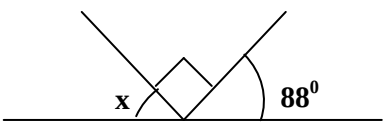
v) Find the $(n + 1)^{th}$ term of the number pattern

vi) Find the difference between 2018^{th} and 2019^{th} term of the above number pattern?

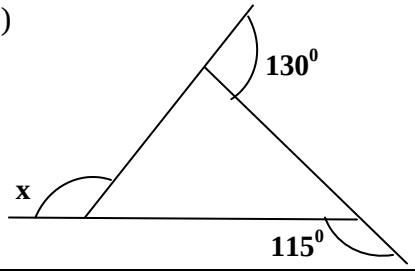
$3 + 1 + 2 + 2 + 2 + 2 = 12\ Marks$

06. Find the magnitude of angle represented by x in each of the following figure

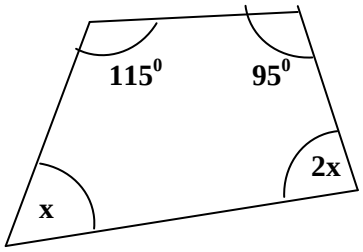
i)



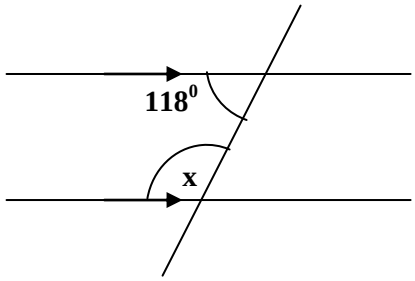
ii)



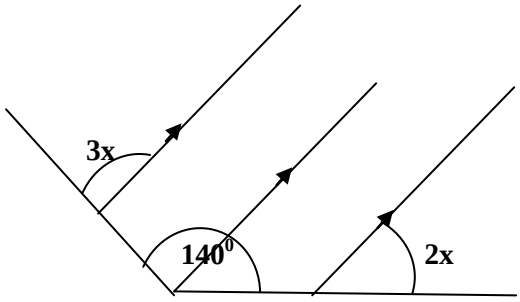
ii)



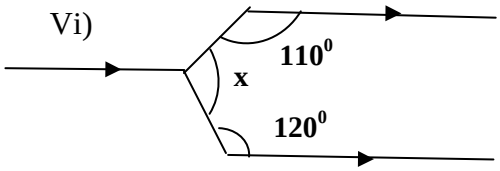
Iv)



v)



Vi)



$6 \times 2 = 12\ Marks$

07. a) Factorize

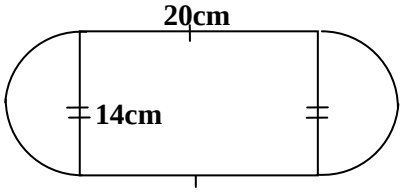
i) $2x^2 + 6xy$

ii) $mp - nq - aq + ap$

iii) $x^2 - 5x - 6$

iv) $m^2 - 49$

b) Find the perimeter of given compound figure



$2 + 2 + 2 + 2 + 4 = 12\ Marks$