



# Mn / Sithyvinayakar Hindu College

(National School – Mannar)

First Term Exam - 2019

## Mathematics

Grade - 8

Index No - .....

Time – 2 Hour 30 Minutes

### Part - 1

- Answer all question 1 to 20 on this paper itself
- Each questions carries 02 marks.

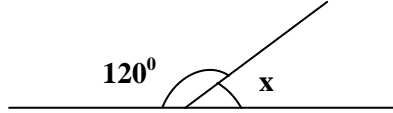
1. Write the next two terms of the number pattern  
3, 7, 11, 15, -----,-----

2. What is the complementary angle of  $60^{\circ}$ ?

3. Simplify  $(+7) + (-4)$

4. Write a platonic solid that having square face.

5. Find the magnitude of  $x$



6. If  $x = 3$  and  $y = (-1)$ , Find the value of  $x + 3y$

7. Solve.  $2x - 1 = 5$

8. Simplify  $\frac{5}{9} \times 1\frac{4}{5}$

9. Factorise  $5x + 20y + 15$

10. What is the length of radius of the circle with diameter 11cm?

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

12. Remove the brackets and simplify  $2(x - y + 3) + 3x$

13. Write 60 as product of prime factors

14. Find the H.C.F of 6,12 and 36

15. Find the value of  $\sqrt{36} \times \sqrt{49}$

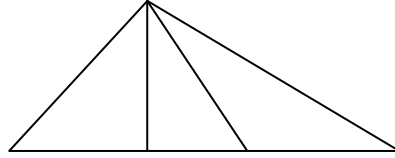
16. Fill in the blank  $\frac{\square}{(-2)} = (-9)$

17. Write in ascending order  $\frac{7}{20}, \frac{4}{10}, \frac{9}{25}, \frac{17}{50}$

18. If a side length of a square is 6cm. Find the length of a side of an equilateral triangle having the same perimeter as that of the square?

19. Find the sum of the counting numbers from 1 to 20?

20. Find the number of triangles in this figure?



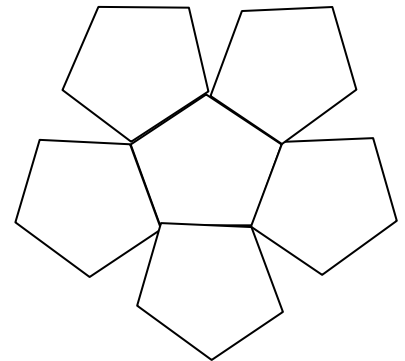
$20 \times 2 = 40$  Marks

## Part II

- Answer the first question and another four questions.
- First question carries 16 marks and other questions carry 11 marks each

01. Recall the activity you did in your class room on “ constructing the solids” and answer the following questions

i) Name the solid that you made by using this block?



ii) How many such blocks did you use for that?

iii) Write the number of faces, edges and vertices of the above solid?

iv) Write a property of platonic solid.

v) Name two platonic solids except above solid.

vi) Write the Euler's relation

vii) Find the number of faces of a solid that has 4 vertices and 6 edges.

$2 + 2 + 2 + 3 + 2 + 2 + 3 = 16$  Marks

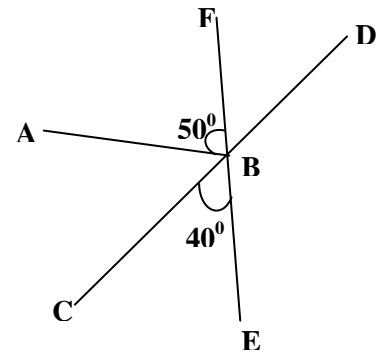
02. Answer the following questions according to the information given in the figure (CD and EF are straight lines)

i) Name a pair of vertically opposite angle.

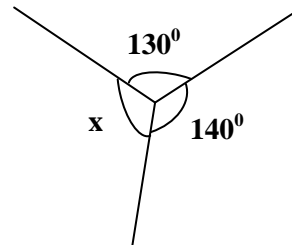
ii) Find the magnitude of  $\widehat{DBF}$ .

iii) Name a pair of supplementary angle.

iv) Find the magnitude of  $\widehat{ABC}$



b) Find the value of  $x$



$2 + 2 + 2 + 2 + 3 = 11$  Mark

03. a) Find the value of  $(+2) - (-3)$  by using the number line

b) Simplify

i)  $(-5) - (-3) + (+7)$

ii)  $2(x + 3) + 3(2x - 1)$

c) Fill in each blanks with suitable directed number

i)  $(-20) \div (\dots\dots) = (+5)$

ii)  $\frac{(+3) \times (\dots\dots)}{(-2)} = (+6)$

$3 + 2 + 2 + 2 + 2 = 11$  Marks

04. a) What is the 15<sup>th</sup> odd number.

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

c) Find the value of each of the following

i)  $\sqrt{(2 \times 5)^2}$

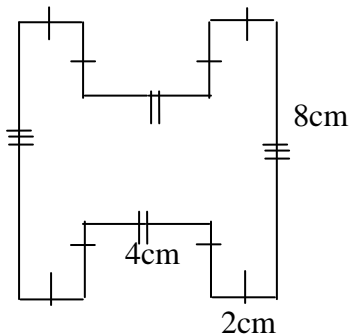
ii)  $\sqrt{2 \times 2 \times 3 \times 3 \times 3 \times 3}$

iii) The area of a square land is  $196 \text{ cm}^2$ . Find the length of a side of the land?

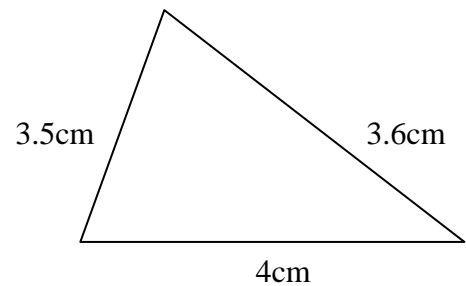
$2 + 2 + 2 + 2 + 3 = 11 \text{ Marks}$

05. a) Calculate the perimeters of the following figures

i)

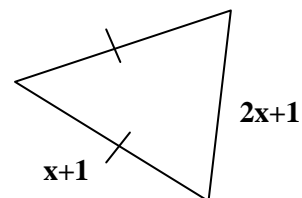


ii)



b)

i) Write the perimeter of the triangle in the figure as an algebraic expression and give your answer in simplest form.



ii) If its perimeter is 31cm Find the value of  $x$ .

iii) Find the length of the longest side of this triangle.

$2 + 2 + 2 + 3 + 2 = 11 \text{ Marks}$

06. a) Fill in the blanks

i)  $5650kg = \dots t \dots kg$

ii)  $4.68t = \dots kg$

b) i) Add  $10t\ 675kg + 2t\ 400kg$

ii) Subtract  $16t\ 250kg - 4t\ 300kg$

c) A lorry had to make 5 trips in order to transport a quantity of rice of mass 42.5t. If the lorry carried an equal amount of rice on each trip, Find the mass of the rice it carried on one trip.

$2 + 2 + 2 + 2 + 3 = 11$  Marks