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පළමු වාර පරීක්ෂණය - 2020
First Term Test - 2020

Mathematics **Time - 2 hours**

Name / Index No …… **Grade 8**

- Answer all the Questions

01. Simplify

2.05 + 1.3 + 0.082

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02. Write down the supplement of 135^0

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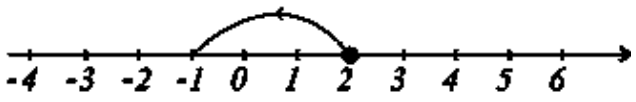
03. Fill in the blanks by using the number line given below



..... + (-3) = ...

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04. write the general term of the number pattern

1 , 3 , 5 , 7 , 9 , ……..

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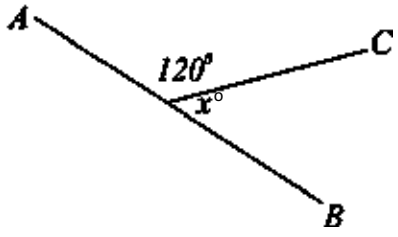
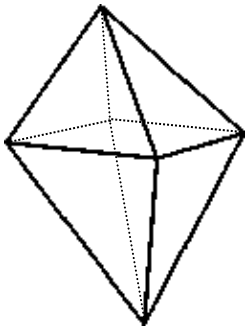
05. 

If AB is a straight line,
find the value of x°

06. 

What is the name used to identify the solid object shown in the figure

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07. Simplify

$2x\,(3x + 3) + 5x$

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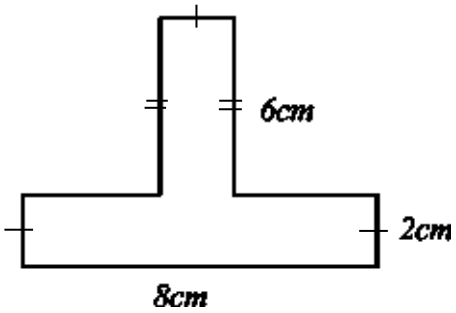
08. 

Find the perimeter of the given figure

09.

Items	Price of 1 kg
Rice	a
sugar	b
Dhal	c

Using the table given below, construct an algebraic expression for the price of 5 kg of rice, 2 kg of dhal and 1 kg of sugar.

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10. Find the HCF (Highest common Factor) of 12 and 18

11. Simplify

(+5) – (-2)

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12. Express the following expression as a product of powers

2 × 2 × 2 × p × p × q × q × q

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13. Factorize (Express the following expression as product of two factors)

$4 + 2x$

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14. If Rs. 5600 was divided between Kamal and Wimal in the ratio 3 : 4 , Find the amount received by Kamal.

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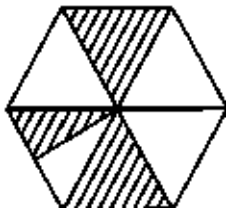
15. Express the shaded region as a fraction of whole figure.



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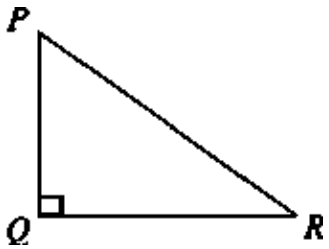
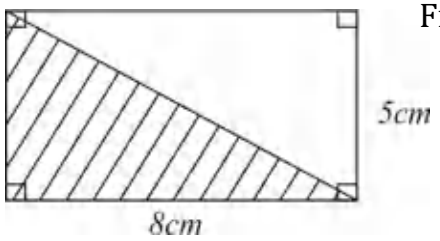
16. Name a pair of complementary angles of the given triangle.



17. The mass of a box of present is 2kg and 350g. Express the mass of 3 such of boxes, in kilogrammes.

18. In a solid there are 9 faces and a vertices. Find the number of edges of it.

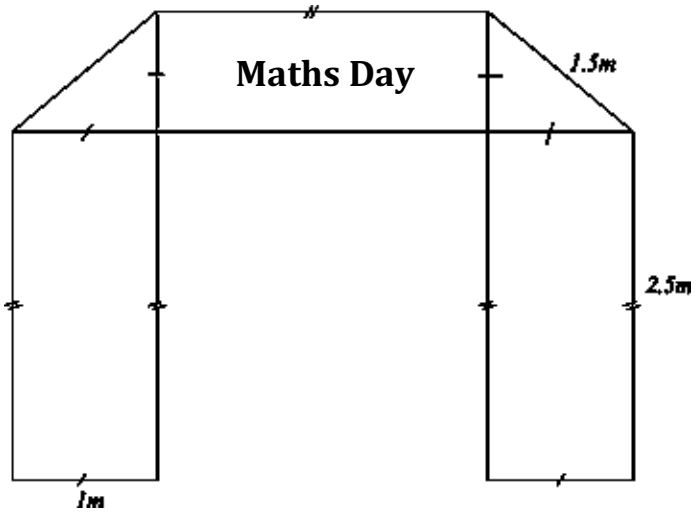
19. 

Find the area of the shaded part of the figure.

20. Write down an example of square number which is obtained by getting sum of the another square numbers.

Part II

- Answer five questions only.



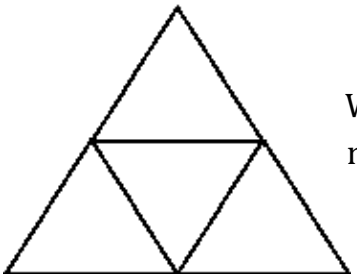
The above picture show a pandal (Thorana) which was created by grade 8 students in a certain school for their "Maths Day" celebration.

i. Find the perimeters of the two triangular Parts. (02 Marks)
ii. Find the name of the shape of a plane figure, Which is obtaining by joining two plane figures in the given figure (02 Marks)
iii. Find the minimum length of a ribbon to fixe around the rectangular part which is written "Maths Day" (02 Marks)
iv. Find the area of the red colour clothes needed to cover pandal (Thorana) except rectangular part (Mentional in part iii) (02 Marks)
v. If the cost of 1 m^2 of red clothes is Rs. 220 , Find the total cost needed to buy red clothes. (02 Marks)

02. Information about a solid object is as follows

Vertices	Face	Edges
20	12	30

i. Write down the name of the solid (01 Marks)
ii. Show that this solid is saticefied with Euler's Relationship. (02 Marks)
iii. What is the shape of the face of the above solid (02 Marks)
iv. Write down two special features of a platonic solid (02 Marks)
v. Name 5 Platonic solids (03 Marks)
vi.



What is the solid that can be constructed by using the net given below. (02 Marks)

03.

i. Express 12 as a product of prime factors. (02 Marks)

ii. Factorize (separate into facors)

a) ab + 2a (02 Marks) b) x + xy (02 Marks) c) -12 x + 3y (02 Marks)

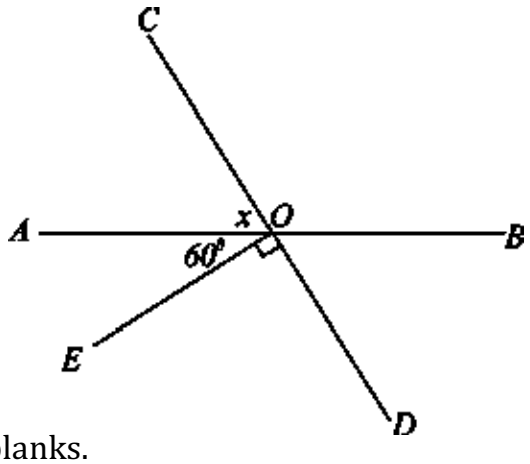
iii. Express 72 as a product of powers , With the prime factors as the bases.

iv. If p = 2 and q = 3 , find the value of the expression given below.

$3p^3q^2$

(02 Marks)

04.



i. Fill in the blanks.

a) Vertically opposite angle of $A\hat{O}C$ is …….. (01Marks)

b) $A\hat{O}C$ and $A\hat{O}E$ are a pair of …… angles (02 Marks)

ii. Find the value of X^0 (02 Marks)

iii. Name a pair of supplementary angles of the given figure (02Marks)

iv. Find the value of COB. (03 Marks)

v. Sadun said" that EOC and AOC are the pair of a adjacent angles" Do you agree with that statement? Give reasons for your answer. (03 Marks)

05.

i. Mass of the box of chocolate is a gramme and the mass of the box is e gramme construct an algebraic expression for the mass of the chocotale in 15 boxes.

ii. Simplify

a) 2 (3b- 1) (02 Marks) b) 2p (4p – 2q) (02 Marks)

iii. Simplify

3 (2b – c) – 2 (2b + 2c) (02 Marks)

iv. If x = 3 and Y = (-1) , Find the value of the expression 2x - 3y + 3

06.

i. Write down the next two terms of the number pattern given below.

1 , 3 , 6 , 10 , …….. , ……..

ii. Write the name of the number pattern given above.

iii. Draw then pattern related to the 5^{th} term of the number pattern by using dots. (02 Marks)

iv. Write down the first five terms of the number pattern of general term n^2 (02 Marks)

v. Which term is 121 in the number pattern mentionat in [iv]

vi. Write down the number which is common for above both number patterns (02 Marks)