



විද්‍යාලීය පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව  
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Department of Education - Western Province Department of Education - Western Province  
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වර්ෂ අවසාන ඇගයීම  
ஆண்டிறுதி மதிப்பீடு - 2019  
Year End Evaluation

ශ්‍රේණිය } 09  
தரம் }  
Grade }

විෂයය }  
பாடம் } Mathematics  
Subject }

පත්‍රය }  
வினாத்தாள் } I, II  
பaper }

කාලය } 02 Hours  
காலம் }  
Time }

Name: .....

Index No : .....

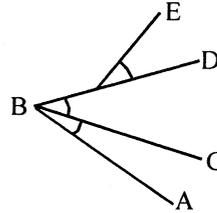
## Part I

- Answer all the questions on this paper itself.
- Each question carries 02 marks.

(1) Find the 8<sup>th</sup> term of a number pattern where the general term is  $T_n = 2n - 5$ .

(2) Convert the binary number  $1010_{\text{two}}$  in to base ten.

(3) Name a pair of adjacent angles shown in the figure.



(4) Using the knowledge of factors, find the value.

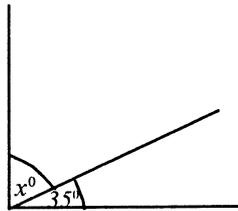
$$102.5^2 - 2.5^2$$

(5) If a vender has to incur a loss of 25% when selling a wrist watch for Rs 900, find the buying price of it.

(6) Solve.  $\frac{y - 5}{2} = 3$

(7) Simplify  $\frac{6}{7}$  of  $\frac{2}{3}$

(8) If the figure shows a pair of complementary angles, find the value of  $x$ .

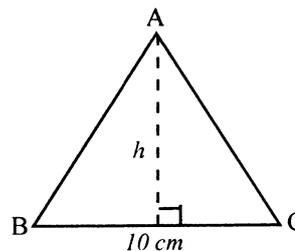


(9) Express 1.5 cubic meters in liters.

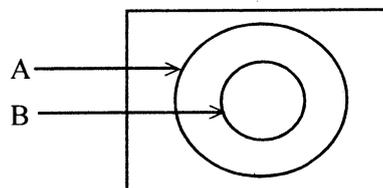
(10) Round off to the nearest first decimal place. 200.85

(11) What is the size of the class intervals (10 - 19) and (20 - 29)?

(12) Area of the ABC triangle is  $25 \text{ cm}^2$ .  
Find the value of the perpendicular height ' $h$ ' of it.



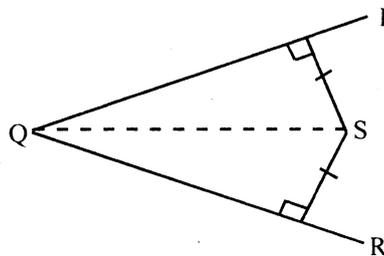
(13) Shade the region  $A \cap B$  in the given Venn diagram.



(14) Make ' $b$ ' the subject of the formula  $a = \frac{bx}{c-d}$

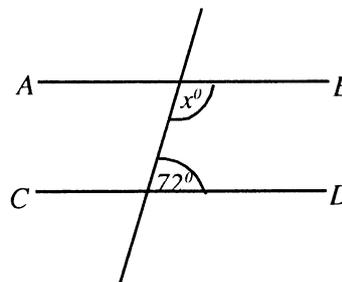
(15) Write the equation of the straight line where the gradient is  $\frac{2}{3}$  and the intercept is -1.

- (16) If the perpendicular distance from S to PQ and QR are equal, write the relationship between  $\hat{PQS}$  and  $\hat{RQS}$ .

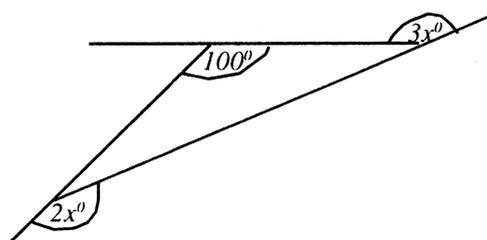


- (17) Area of the base of a cuboid shaped container is  $25\text{cm}^2$ . If the capacity of it is  $200\text{ ml}$ , find the height of it.

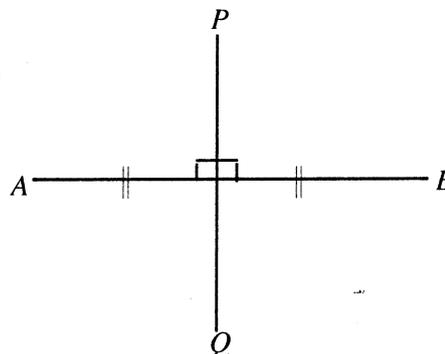
- (18) What should be the value of the angle  $x$ , in order to make the two straight lines AB and CD parallel?



- (19) According to the information given in the figure, find the value of  $x$ .



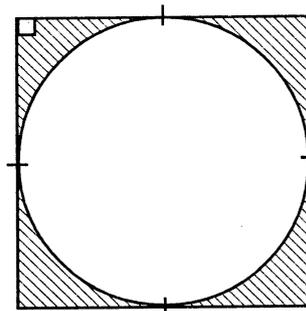
- (20) Locus of a moving point equidistant to the two points A and B is shown by PQ. What is the geometrical name of it?



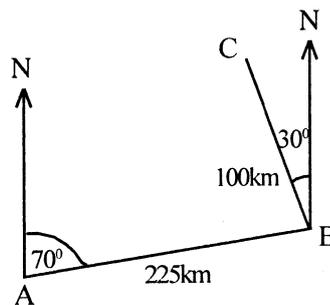
## Part II

- Answer the first question and another 04 questions only.
- First question carries 16 marks and other questions carry 11 marks each.

- (1) (a) Answer the following questions given regarding the activity, "finding the area of a circle" that you have done in the lesson, "Area of the plane figures"
- (i) Draw the initial plane figure that you have used for the activity.
  - (ii) Name the plane figure that you made by cutting the initial plane figure into sectors.
  - (iii) What is the conclusion that you have arrived regarding the areas of two plane figures?
  - (iv) Write down the formula that you have obtained for the area of a circle, in terms of  $\pi$  and  $r$ .
  - (v) Using the formula, find the area of a circle with radius 7 cm. (Take  $\pi = \frac{22}{7}$ )
  - (vi) A circle is situated inside a square with the area  $196\text{cm}^2$ , as shown in the figure.
    - (a) What is the radius of the circle?
    - (b) Find the area of the shaded region in the figure.



- (b) According to the given sketch, find the following.
- (i) Bearing of B from A.
  - (ii) Bearing of C from B.
  - (iii) If 50km of the actual length is represented by 1 cm in the scale diagram, write down the length of AB and BC in the scale diagram.



- (2) An incomplete table of values prepared to draw the graph of the function  $y = -3x + 1$  is given below.

$x$	-2	-1	0	1	2
$y$	.....	4	1	.....	-5

- (i) Fill in the blanks in the table.
- (ii) Draw the graph of the function in the a suitable cartesian plane.
- (iii) Draw the straight line  $y = 4$  on the same cartesian plane.
- (iv) Write the coordinates of the point where the function and  $y = 4$  line intersect.
- (v) Draw a straight line parallel to  $y = -3x + 1$  and the intercept - 2 on the same cartesian plane.

- (3) (a) (i) Express  $\frac{25}{8}$  as a mixed number.
- (ii) Simplify  $\frac{2}{3} \times \left(\frac{4}{5} + \frac{1}{2}\right)$  and express the answer in its simplest form.
- (b) A father gave  $\frac{1}{4}$  of his land to his son and he sold  $\frac{1}{2}$  of the remaining for Rs. 300 000.
- (i) What fraction of the land is remaining after giving to son?
- (ii) What fraction of the whole land is sold?
- (iii) Find the value of the whole land.

- (4) Using only the straight edge and the pair of compasses do the following constructions in a single diagram. Show the construction lines clearly.
- (i) Draw the AB straight line where  $AB = 7\text{cm}$ .
- (ii) Construct  $\hat{BAC}$  such that  $\hat{BAC} = 60^\circ$ .
- (iii) Locate the point C where  $AC = 5\text{ cm}$  and complete the triangle ABC. Measure and write BC length.
- (iv) Construct the angle bisector of  $\hat{BAC}$ .
- (v) Construct the locus of a moving point equidistant to the points A and B.
- (vi) Name the intersection point of above (iv) and (v) loci as X.

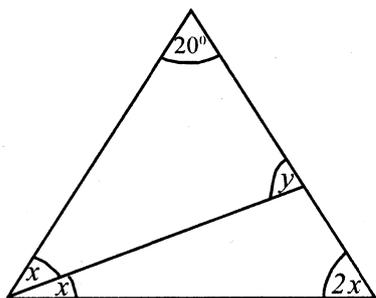
- (5) (a) (i) Simplify and express the answer in its simplest form.

$$\frac{2y}{5} + \frac{y}{10}$$

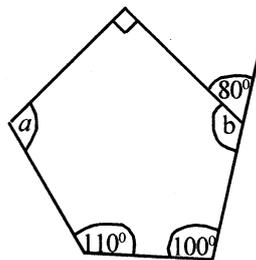
- (ii) Expand and simplify.  $(a + 3)(a - 1)$

- (b) A student bought 3 pencils and 2 pens for Rs. 66. from the school book shop. Shop owner said that the different between 3 pencils and 2 pens is Rs. 6.
- (i) By taking the price of a pencil as Rs.  $x$  and the price of a pen as Rs.  $y$ , build up a pair of simultaneous equations.
- (ii) By solving the two equations find the price of a pencil and pen separately.

- (6) (a) According to the information given in the diagrams, find the magnitudes of angles marked in English letters.

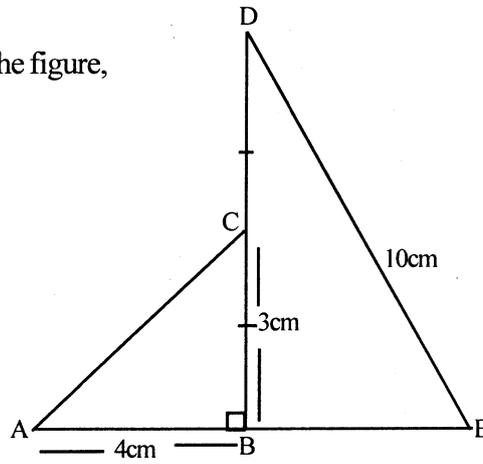


- (i) Find  $x$  and  $y$



- (ii) Find  $a$  and  $b$

- (b) According to the information given in the figure,  
 (i) Calculate AC length  
 (ii) Calculate BE length

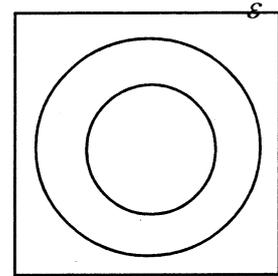


- (7) (a) Copy the given Venn diagram in your answer sheet and include the given data in it.

$$\mathcal{E} = \{ 1, 2, 3, 4, 5, 6, 7, 8, 9 \}$$

$$A = \{ 4, 6, 8, 9 \}$$

$$B = \{ 4, 8 \}$$



- (b) In a bag there are 4 red balls, 3 blue balls and 5 green balls with same size and shape. A ball is taken randomly from the bag.  
 (i) Find the probability of getting a blue ball.  
 (ii) Find the probability of not getting a red ball.
- (c) Marks obtained by 188 students in the grade 9 section of a certain school is given below.

Marks (class interval)	Number of students (frequency)
0 - 8	15
9 - 17	18
18 - 26	20
27 - 35	40
36 - 44	41
45 - 53	30
54 - 62	24
	188

- (i) Find the range of the distribution.  
 (ii) Find the modal class of the distribution.  
 (iii) Find the median class of the distribution.