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மேல் மாகாணக் கல்வித் திணைக்களம்
Department of Education - Western Province

වර්ෂ අවසාන ඇගයීම
ஆண்டிறுதி மதிப்பீடு - 2019
Year End Evaluation

ශ්‍රේණිය தரம் Grade	08	විෂයය பாடம் Subject	**Mathematics**	පත්‍රය வினாத்தாள் **Paper**	I ,II	කාලය காலம் **Time**	02 Hours

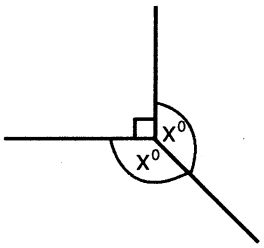
Name : ..... Index No : .....

Part I

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

(1) If A = { odd numbers between 6 and 14 }, write n (A)

(2) Find the value of x.

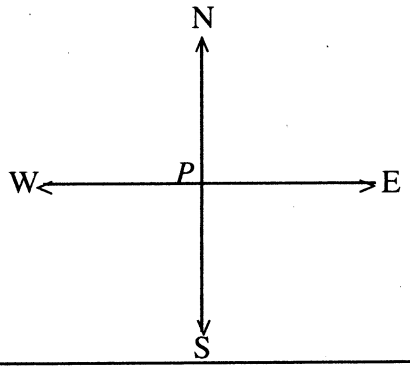


(3) Express as a product of two factors. $12a^2b + 18ab^2 - 30ab$

(4) Mass of a lorry is 6.58 t. 2800kg of rice is loaded into the lorry. What is the mass of the lorry with the above items?

(5) Write in ascending order $(-2)^3$, 3^2, $(-1)^{2019}$, 1^{2018}

(6) Q is located 200 m away from P, in the direction of S 30^0 W. Draw a sketch to represent the above information.



(7) Simplify. $7\frac{1}{7} \div 8\frac{1}{3}$

(8) If the following statements are true make '✓' and if they are wrong mark '✕' in the blank boxes.

(i)	Semi pure tesselations contain only one plane figure.	
(ii)	Regular tesselations can be created using squares with same size.	

(9) In a bag thre are 17 identical pens with blue, black and red colours. 8 of it are blue and 5 are black. All the other pens are red. If a pen is taken randomly from the bag, find the probability that the pen being a red pen.

(10) Actual length of 40 m is represented by 5 cm in the scale diagram. Write the scale used in the diagram as a ratio.

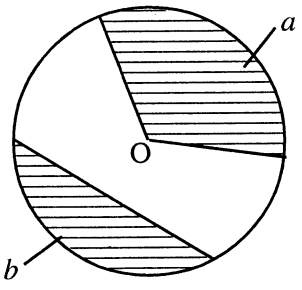
(11) In the circle with the center O, regions *a* and *b* are shaded. Underline the correct statement regarding *a* and *b*.

(i) *a* is a sector, *b* is a chord.

(ii) *a* is a sector, *b* is a minor arc

(iii) *a* is a sector, *b* is a minor segment.

(iv) *a* is a sector, *b* is a major segment.



(12) Solve. $11 - \frac{5}{9}c = 1$

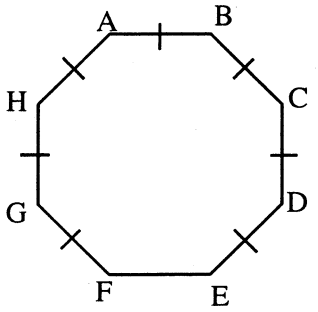
(13) Fill in the blank boxes using suitable numbers.

$$\frac{(-8)\times \square}{(-12)} = \frac{(+24)}{(-12)} = \square$$

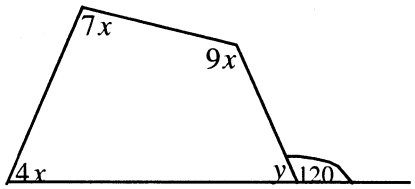
(14) ABCDEFGH is a regular octagon.

(i) How many axes of symmetry are there?

(ii) What is the order of rotational symmetry?



(15) In the given figure, find the values of x and y.



(16) General term of the triangular number pattern starting at 1, written in ascending order is $\frac{n(n+1)}{2}$.

What is the 19th triangular number?

(17) Write the percentage corresponding to the ratio 3 : 5.

(18) Express the answer as a mixed number. $\frac{5}{8} \times 6$

(19) Area of the base of cuboid shaped tank is 8400 cm^2. When 420 liters of water is put into the tank, find the height of the water in tank.

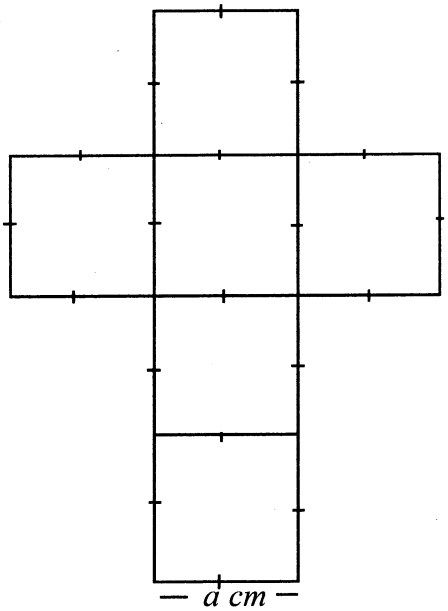
(20) Equilateral triangular shaped iron frame with the length of a side 16 cm is unfolded and a rectangle with the breadth 5 cm is made. Calculate the length of the rectangle.

Part II

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

(1) Recollect the activities done in the lessons area, volume and solids with the guidance of your mathematics teacher.

Figure shows a net of a solid prepared by Nimal.



(i) What is the name of the solid that Nimal wants to prepare?

(ii) Give an example for that solid.

(iii) If the length of the side of it is 'a' cm, express the surface area of the solid in terms of 'a'.

(iv) If the surface area of the solid that Nimal made is 600 cm^2, Find the value of a

(v) Calculate the surface ara of a cuboid with the length, breadth and height 40 cm, 25 cm, 20 cm respectively.

(vi) How many liters of water are needed to, fill the cuboid with the above measurments?

(vii) Name two other platonic soilds except the solid made by Nimal.

(viii) In a certain solid, there are 13 vertices and 24 edges. How many faces are there in it?

(2) Marks obtained by Piyal for 10 subjects in the first term evaluation is given below.

78, 57, 83, 91, 82, 69, 70, 78, 63, 87

(i) Represent the above information in a stem and leaf diagram.

(ii) What is the maximum value of the data?

(iii) Using the maximum value, write the "key".

(iv) Find the range of the data.

(v) Find the median of marks otained by Piyal.

(vi) Nanda scored 32 more marks than Piyal,and became the first in the class. Calculate the mean mark of Nanda.

(3) (a) Perimeter of the triangle ABC is 23 cm.

(i) If AB = 9cm, BC = 7 cm, Find the length of AC.

(ii) Using the straight edge and the pair of compasses, construct the triangle ABC.

(iii) According to the lengths of the sides what type of a triangle is ABC?

(iv) Measure and write the magnitudes of the angles of the triangle ABC.

(b) Can there be a triangle with the side lengths 5 cm, 7 cm and 13 cm? Give reasons for your answer.

(4) (a) (i) Draw a cartesian plane where the x - axis and y - axis are marked from -6 to 6.

(ii) Mark the points A (0, 4) B (4, 0) C (0, -4) D (-4, 0) on the cartesion plane that you have drawn.

(iii) Draw the straight lines $y = 2$ and $x = -1$ on the same cartesion plane.

(b) (i) Represent the inequality $-2 \leq x < 3$ on a number line.

(ii) Wrie all the integral solutions which satisfy the above inequalitiy.

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(5) (a) Use $86 \times 237 = 20\,382$ and find the value of following expressions.

(i) 8.6×23.7

(ii) 0.086×0.237

(iii) $\frac{203.82}{0.237}$

(iv) $\frac{20.382}{8.6}$

(b) Rs. 10 200 is divided among A, B and C according to the ratio 2 : 3 between A and B and 5 : 3 between B and C

(i) Write the ratio in which the money was divided between A, B and C.

(ii) Express seperately the amounts received by each of them.

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(6) When the time in Sri Lanka, in the $+5\frac{1}{2}$ time zone is 09 : 45 on Sunday 2019 - 04 - 21,

(i) Find the time and date in Greenwich.

(ii) Find the time and date in the -9 time zone.

(iii) In which time zone does the time and date becomes 17 : 15 on Saturday 2019 - 04 - 20?

(*b*) 60% of Students in a certain mixed school are girls. Number of boys in the school are 1136. How many students are there in the school?

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(7) (*a*) (i) A parcel has six books of value '*a*' rupees each, three pens value '*b*' rupees each and two pencils value '*c*' rupees each. Write an expression for the total value of the parcel.

(i) A person who decided to donate 10 such parcels, paid Rs. 6 500 to the shop owner to buy it. Write an expression for the balance he received.

(iii) If $a = 90$, $b = 20$, $c = 12$, calculate the balance amount after buying the 10 parcels.

(*b*) (i) Write 1764 as a product of prime factors.

(ii) Find the value of $\sqrt{1764}$