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 மேல் மாகாணக் கல்வித் திணைக்களம்
 Department of Education - Western Province

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 ஆண்மறுதி மதிப்பீடு - 2014
 Year End Evaluation

ප්‍රවේශ
 தரம் } 08
 Grade

විෂය
 பாடம் } MATHEMATICS
 Subject

පත්‍ර
 வினாத்தாள் } I, II
 Paper

කාලය
 காலம் } 2 hours
 Time

Index No

Name :-

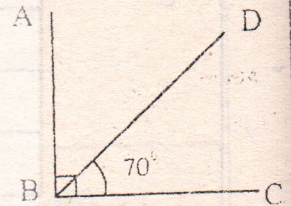
Part I

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

(01) Write the suitable number in the blank. $\frac{\square}{(-6)} = -3$

(02) The perimeter of a square is 24 cm. Find the length of a side of it.

(03) In the figure $\hat{C}BD = 70^\circ$. $\hat{A}BC$ is a right angle. Write the complement of $\hat{C}BD$.



(04) The general term of a number pattern is $3n - 1$. Write the first two terms of it.

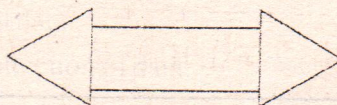
(05) The price of a book is 3 times the price of a pen. If the price of a pen is Rs. x , write an algebraic expression for the price of a book and a pen.

(06) A lorry was loaded with 5 metric tons of rice. 2 tons and 750 kilograms of rice was unloaded from the lorry to sell for a whole seller. What is the mass of the rice remaining in the lorry?

(07) Consider the numbers $(-5)^{-7}$ and $(-5)^7$. Are the two values equal? Give reasons.



(08) (i) In the given diagram, how many axes of bilateral symmetry are there?



(ii) What is the order of rotational symmetry of it?

(09) 62° , x° , 88° are the magnitudes of angles in a triangle. What is the value x ?

(10) Write an equivalent ratio for $\frac{3}{4}$.

(11) (i) Write the reciprocal of $\frac{3}{5}$.

(ii) Write the reciprocal as mixed number.

(12) If 11.25m long rope is cut into 0.05m long equal pieces, how many such pieces can be cut from it?

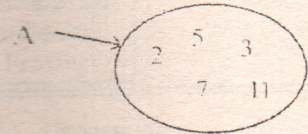
(13) 2 kg of wheat flour, $\frac{1}{2}$ kg of green gram flour and 750g of sugar were mixed together to make a certain food. Write the ratio, the wheat flour : green gram flour : sugar in the mixture, in simplest form.

(14) Solve the equation. $2(x - 3) = 14$

(15) The price of a news paper is Rs.50. The price of it raised in 10%. What is the new price of the newspaper?

(16) (i) By using the given Venn diagram, fill in the blank with the suitable symbol.

3.....A



(ii) Write set A using another set notation method.

(17) Chicago in America is in (-6) time zone and Sri Lanka is in $(+5\frac{1}{2})$ time zone. When the time in Chicago is 6.00 am, find the time in Sri Lanka.

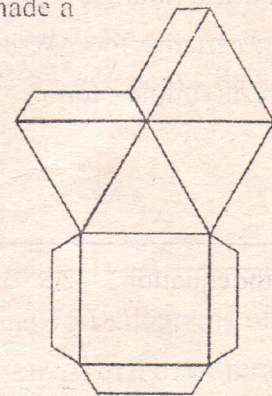
(18) The location of B from A is $E 65^{\circ} S$. What is the bearing of B from A?

(19) What type of a locus can be marked by using the instrument named "marking gauge" (Warakkalaya), which is used by carpenters?

(20) When a child was given 2 nets as shown in the figure, he made a solid with only triangular faces.

(i) What is the name of the solid?

(ii) Draw a sketch of the solid made by him.



Part II

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

- (01) (a) Recollect a situation where you have gathered numerical data in the class room.
- Write an advantage of tabulating numerical data.
 - Explain what you mean by "Range" of a collection of data.
- (b) The ages of 36 scouts in a certain school to the nearest year is tabulated as follows.

Age (years)	13	14	15	16
Number of scouts	5	7	11	13

A pie chart is needed to be drawn using the above information.

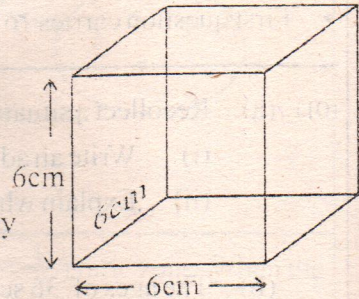
- Copy the following table in your answer sheet and fill in the blanks.
- Draw a pie chart using these data.
- What is the mode of the ages?

Age (years)	Number of Students	Fraction	Relevant Angle
13	5	$\frac{5}{36}$
14	7
15	11
16	13

- (c) If a scout in this team was selected randomly.
- Write the success fraction of "the student being 14 years old".
 - Write the success fraction of "the student being 14 years or 15 years old".
 - Write the success fraction of "the student not being 14 years old".
- (02) (a) (i) Solve the inequality. $7 - x \geq 10$.
- (ii) Represent the solution of the inequality on a number line.
- (b) (i) Draw a cartesian plane with values of x-axis and y-axis from (-5) to (+5).
- (ii) Mark the points A (-4, -3), B (3, -3), C (3, 4) on the cartesian plane you have drawn.
- (iii) Mark a point D to make ABCD a rectangle and complete the rectangle.
- (iv) Write the coordinates of the point D.
- (v) In the rectangle you have constructed, write the equation of the straight line AB.

103) The figure shows a cubic shaped tank without the lid, made out of a metal sheet. The measurements inside the cube is given in the figure.

- Find the surface area of the inner side of the figure.
- Write the volume of the cube in milliliters.
- How many bottles of oil with 50ml are needed to fill this tank completely?
- If 50 ml/ bottle of oil costs Rs. 150. how much money is needed to fill the tank completely?
- Show that the cube made by oil, after filling the tank with oil, satisfies the Euler's relation



104) (a) According to the information given in the diagram, answer the following questions.

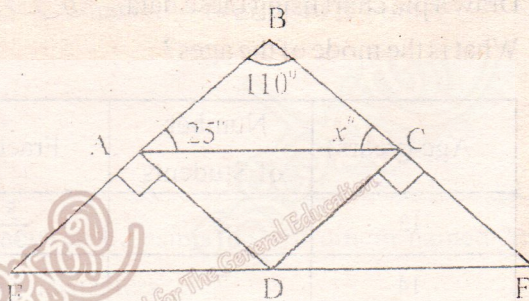
$$\hat{EAD} = 90^\circ$$

$$\hat{DCF} = 90^\circ$$

$$\hat{BAC} = 25^\circ$$

$$\hat{ABC} = 110^\circ$$

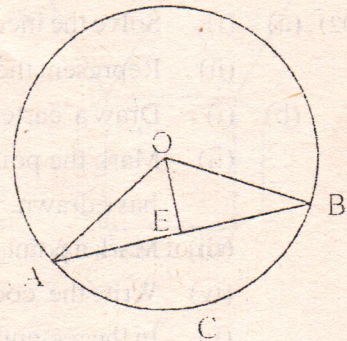
$$\hat{ACB} = x$$



- Find the value of x .
- What is the magnitude of the angle \hat{DAC} ?
- Write an adjacent angle for \hat{ADF} .
- Write a complementary angle for \hat{AED} .
- Write a supplementary adjacent angle for \hat{CDE} .

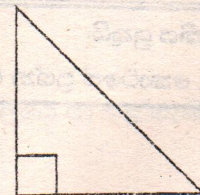
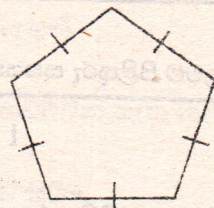
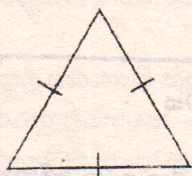
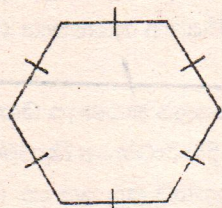
(b) According to the marked data on the circle with the centre O.

- Name an angle of a sector.
- Name a minor segment.
- Name a chord of the circle.



- (05) (a) (i) Factorize $ax^2 - bx^2 + cx^2$.
 (ii) $2(a+3) - 2(a-1)$ remove the brackets and simplify as much as possible.
- (b) (i) Write 324 as a product of prime factors.
 (ii) Find the value of $\sqrt{324}$.
 (iii) Compare the numbers 2^3 and 3^2 using the symbols $>$ or $<$.
 (iv) Write $27x^3$ as a power of a product.

- (06) (a) The figures given below are polygons.



regular hexagon equilateral triangle regular pentagon right angled triangle

- (i) Construct a regular tessellation by using the above figures appropriately.
 (ii) Construct a semi-pure tessellation by using the above figures appropriately.
- (b) AB is a 50m long straight fence. A tube well is situated on a bearing of 045° from A and on a bearing of 315° from B.
- (i) Write a suitable scale to draw a scale diagram using the above data.
 (ii) Draw a sketch and mark the data.
 (iii) Draw the Scale diagram.
 (iv) If the location of the tube well is C, measure and write magnitude of the angle \hat{ACB} .

- (07) (a) Simplify.

(i) $1\frac{1}{2} + \frac{3}{4}$

(ii) $\frac{1}{3} \times 1\frac{1}{5}$

(iii) $3\frac{1}{2} \div 2\frac{1}{3}$

- (b) Area of a rectangular shaped land is 25.5m^2 . If the width of it is 2.5m, find the length of the land.