



Negombo Educational Zone

Second Term Evaluation - 2024

Grade - 8

Mathematics

Time - 2 hours

Name -

Part - 1

Answer all the questions from 1 to 20 on this paper itself.

1) Write the next two terms of the number pattern,

20, 17, 14, 11, ... , ...

2) Solve the equation. $2x + 1 = 7$ 3) Find the value of $(-7) - (+2)$.

4) Express the shaded fraction as a percentage.



5) If the perimeter of an equilateral triangle is 24cm, find the length of one side.

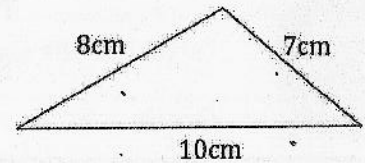
6) When the time in Sri Lanka is 7.00 a.m., find the time in Melbourne in Australia. [The time zone of Sri Lanka is $(+5\frac{1}{2})$ and the time zone of Melbourne is $(+10)$]

7) Choose the null sets and underline.

- Multiples of 20 between 0 and 10.
- Polygons with less than 10 sides.
- Vowels of the English Alphabet.
- People who are taller than 5 meters.

8) Find the value of $\sqrt{225}$ 9) Draw a circle around the supplementary angle and a box around the complementary angle, of the angle 25° 65° 55° 125° 155°

10) Find the perimeter of the triangle given.



11) Find the value of the algebraic expression $8a - 3b$, when $a = 2$, $b = 4$.

12) Express in index form.

$$a \times a \times 2 \times b \times a \times 2 \times b =$$

13) $2.05t$; Write in metric tons and kilograms.

14) There are 20 boys and 25 girls in a class. Write the ratio between the number of boys and girls in the simplest form.

15) If $25 \times 12 = 300$, find the value of 2.5×1.2

16) Factorise ; $5x + 10y$

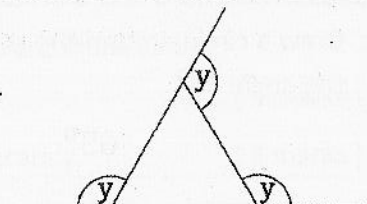
17) Select the plane figure with bi-lateral symmetry but without rotational symmetry.

Regular pentagon, Parallelogram, Rhombus

18) Simplify ; $\frac{3}{5} \times \frac{2}{7}$

19) Write the shape of one face of a regular octahedron.

20) Find the value of y .



Part - 11

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

1) a) The following is an activity that you have done in the lesson "Triangles and Quadrilaterals".

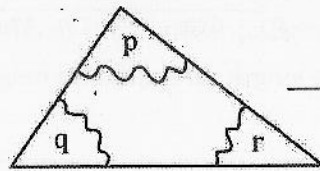
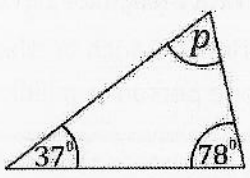


Figure 1

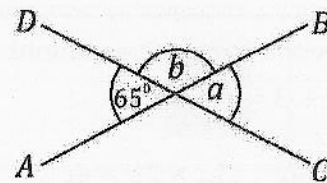


Figure 2

According to the above figures, fill in the following blanks.

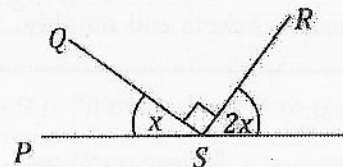
- i. $p + q + r = \dots\dots\dots$ (1 mark)
- ii. According to it, the sum of the $\dots\dots\dots$ angles of a triangle is 180° . (1 mark)
- iii.  Find the value of p (3 marks)

- (b) (i) AB and CD are 2 straight line segments.
Find the value of a and b .



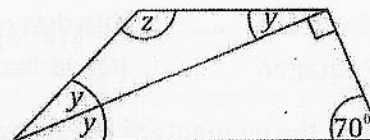
(3 marks)

- (ii) PT is a straight line segment. Find the value of x .
By using it, find the value of $R\hat{S}T$.



(4 marks)

- (iii) Find the value of y and z .

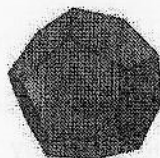


(4 marks)

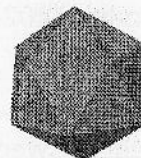
2) (a) Complete the table by using the solids given below.

(9 marks)

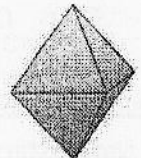
(i)



(ii)



(iii)



	Platonic Solid	Shape of one face of the solid object	Number of faces meeting at a vertex.
(i)			
(ii)			
(iii)			

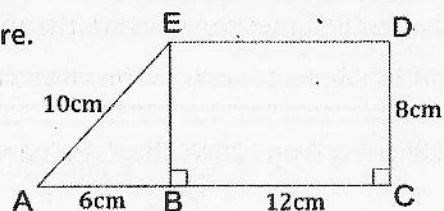
(b) Find the number of faces of a solid with 9 vertices and 16 edges, by using Euler's relation.

(2 marks)

3) The figure show a compound plane figure which consists of a rectangle and a triangle.

i) Find the perimeter of this compound plane figure. (2 marks)

ii) Find the area of this compound plane figure. (5 marks)



iii) Find the total surface area of a cuboid with the length, breadth and height 10cm, 6cm and 4cm respectively. (4 marks)

4) (i) Simplify ; $\frac{3}{8} + \frac{1}{12}$ (2 marks)

(ii) Simplify ; $3\frac{1}{2} \times 2\frac{5}{7}$ (2 marks)

(iii) From a ribbon which is 18m long, how many ribbons can be cut with a length of $1\frac{1}{2}m$? (3 marks)

(iv) The capacity of a bottle with a certain drink is 1.25l. The drink in 3 such bottles are divided among 10 people. Find the amount of drink got by one person in millilitres. (4 marks)

5) (a) Solve the following equations.

(i) $\frac{y}{2} + 3 = 8$

(ii) $2(m + 3) = 12$ (6 marks)

(b) Simplify ; $3a \times 2b \times 4c$ (2 marks)

(c) Remove brackets and simplify. $5(2x + 3) - 4(x - 3)$ (3 marks)

6) (a) Use $\in$ or $\notin$ symbols to fill in the blanks.

- i. 9 {Prime numbers}
- ii. Gampaha {Districts of the western province}
- iii. Pentagon {Quadrilaterals} (3 marks)

(b) List out the elements of the following sets.

- (i) $A = \{ \text{Letters of the word "maharagama"} \}$
- (ii) $B = \{ \text{All the factors of 12} \}$
- (iii) $C = \{ \text{Digits of the number "2024204"} \}$ (6 marks)

(c) Write $n(A)$, $n(B)$ of the above sets A and B. (2 marks)

7) Nimal started a business related to sweet meats on 1st of January 2024 by investing Rs.12,000. After 4 months, Piya joined the business by investing Rs.20,000. At the end of the year, they got a profit of Rs.19,000.

- i. Find the time period of investing money for the business by Nimal. (2 marks)
- ii. Find the time period of investing money for the business by Piya. (2 marks)
- iii. Find the ratio that the profit should be divided among them at the end of the year in the simplest form. (3 marks)
- iv. According to the above ratio, find the profit got by each separately. (4 marks)