

ஒன்றை தரம் Grade	08	விதைய பாடம் Subject	Mathematics	பாதை வினாத்தாள் Paper	I , II	காலை காலம் Time	02 hours
------------------------	----	---------------------------	-------------	-----------------------------	--------	-----------------------	----------

Name : Index No :

Part I

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

01. Write the next two terms of the number pattern, 4, 9, 14, 19,

02. Write the suitable value for the blank.

$$(-5) - (+3) =$$

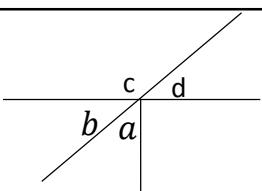
03. Solve. $3x - 4 = 5$

04. Find the side length of a cube with the perimeter of a face 24cm.

05. In time related problems, what are the special names given to 0^0 longitude and 180^0 longitude?

06. $\frac{1}{5}$ of a land is belongs to Siripala. Express it as a percentage of the whole land.

07. According to the figure, what angle is equal to b ? What do you call such a pair of angles?



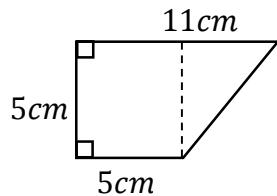
08. If $A = \{0\}$, Is A a null set? Give reasons.

09. When $p = 4$, find the value of $3(2p - 4)$

10. Find the highest common factor of 30 and 45.

11. If $225 = 3 \times 3 \times 5 \times 5$, find the value of $\sqrt{225}$.

12. Find the area of the figure.



13. Factorize. $ax + ay + 3x + 3y$

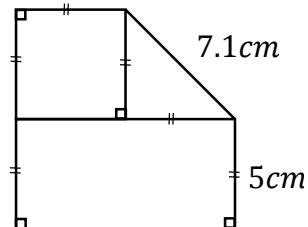
14. Sri Lanka is located in $5\frac{1}{2}$ time zone. Los-Angeles in USA is located in -8 time zone. When the time in Sri Lanka on 2018 – 07 – 23 is 7.30 pm, find the time in Los-Angeles.

15. Marks obtained by a student for a mathematics assessment is 60%. Express it as a fraction in simplest form.

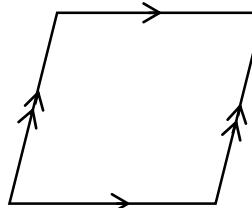
16. Underline the answer which represents the angles in a quadrilateral.

- i. $90^\circ, 110^\circ, 100^\circ, 70^\circ$
- ii. $65^\circ, 90^\circ, 105^\circ, 85^\circ$
- iii. $65^\circ, 100^\circ, 115^\circ, 80^\circ$
- iv. $110^\circ, 110^\circ, 80^\circ, 70^\circ$

17. Find the perimeter of the figure.



18. What is the order of rotational symmetry of the given rombus. Mark the center of rotation O on the figure.



19. Fill in the blank boxes.

$$1\frac{1}{2} \div 1\frac{1}{5} = \frac{3}{2} \div \frac{\square}{5} = \frac{3}{2} \times \frac{\square}{\square} = \frac{5}{4} = 1\frac{1}{4}$$

20. Price of a school bag is Rs. 750. If the price increased by 5%, find the new price of it.

Part II

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

01. Recollect the activity that you have done in the classroom regarding the lesson **ratio**. Answer the following questions using the knowledge gained from the activity.

An incomplete table consisting the information on the amount invested during three years of time and the profit gained by two businessmen Tharusha and Pubudu who run a join textile business is given below.

year	Tarusha		Pubudu		Profit (Rs)
	Amount invested (Rs)	Duration of time (month)	Amount invested (Rs)	Duration of time (month)	
2015	8 000	12	8 000	12	9 000
2016	8 000	12	12	6 000
2017	8 000	12	8 000	8	4 000

- i. Express in the simplest form the ratio between the amounts invested by Tharusha and Pubudu in the year 2015.
- ii. What amount of the profit is received by Tharusha in 2015?
- iii. If the ratio between the amounts invested by Tharusha and Pubudu in the year 2016 is $2 : 1$, find the amount invested by Pubudu.
- iv. Is it fair to divide the profit equally in the year 2016? Give reasons to your answer and find the profit received by Tharusha.
- v. Write two facts that should be considered when dividing a profit gained from a business fairly.
- vi. What fraction of the whole profit is gained by Pubudu in the year 2017?

02. (a) Simplify.

$$\text{i. } \frac{2}{3} + \frac{2}{5} \qquad \text{ii. } \frac{2}{3} \times \frac{2}{5} \qquad \text{iii. } 1\frac{3}{5} \times 5 \qquad \text{iv. } \frac{4}{5} \div 1\frac{1}{3}$$

(b) $1\frac{1}{4}$ cubes of sand can be loaded to a tractor. How many times the tractor has to be loaded in order to transport 10 cubes of sand?

03. (a) Solve the following equations.

$$\text{i. } 2x+1 = 5 \qquad \text{ii. } 2(y - 1) = 8 \qquad \text{iii. } \frac{2x}{3} - 1 = 1$$

(b) The daily salary for a worker who works in a certain company is Rs. x. For every extra hour he works, the company pays Rs. 250.

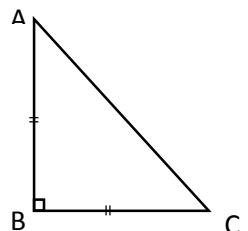
- i. In terms of x, write the daily salary earned by Sunimal, who works extra hour everyday.
- ii. If Sunimal earned Rs. 7 500 by working 5 days, build up an equation including x.
- iii. Solve the equation and find Sunimal's daily salary.

04. (a) State whether the following statements are true or false.

- $2 \in \{ \text{prime numbers} \}$
- \emptyset is the symbol used to represent the null set.
- $\{ \text{Multiples of 7 less than 5} \} = \emptyset$

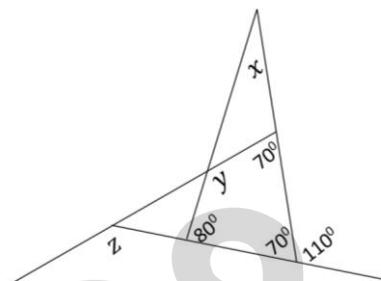
(b) i. Write an example for a null set.
 ii. $A = \{ \text{Letters of the word 'கால்வை'} \}$ Write the set by listing its elements.
 iii. $B = \{ \text{Square numbers between 1 and 25} \}$ Write the set B by listing its elements and write $n(B)$.

05. (a) i. Name the given plane figure according to the lengths of the sides.
 ii. Name the given plane figure according to the angles.
 iii. Name the largest angle of it.



(b) According to the information given in the figure,

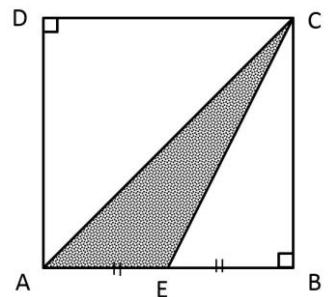
- Find the value of x and y .
- Using the knowledge on exterior angles of a triangle, find the value of z .



06. (a) Calculate the surface area of a cube with the length of a side 5cm.

(b) ABCD is a square with the length of a side 8cm. Mid point of AB is E.

- Find the AE length.
- Find the perpendicular distance from AE to the opposite vertex.
- Find the area of the triangle AEC.
- Find the area of the quadrilateral AECD.



07. (a) i. Express $\frac{7}{20}$ as a decimal number.
 ii. Write 0.12 as a proper fraction.
 iii. Simplify. $4 - 0.23 \times 10$
 iv. Simplify. $0.75 \div 0.5$

(b) There are 40 students in a class. 28 out of them are girls. Express the number of girls as a percentage of the total number of students.