



Royal College - Colombo 07

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Grade 8 - Second Term Test - July 2019

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කාලය : 2 ආ 2
Time : 2 hours

Mathematics

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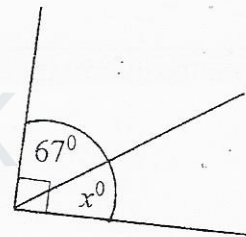
Name :- Grade :- Index number:-.....

Part I

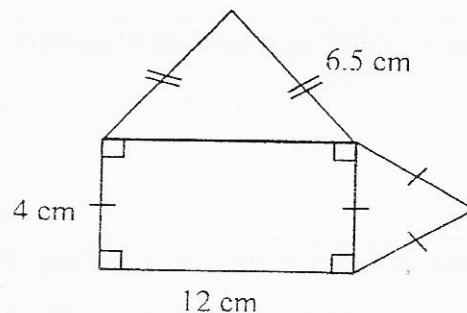
- Answer all the questions on the paper itself.
- Each question carries 2 marks.

01. Write down the next two term of the number pattern 10, 14, 18, 22, 26, ...

02. Based on the information given in the figure, find the value of x.

03. Simplify. $(-7.5) - (-11)$

04. Find the perimeter of the given figure.

05. Simplify. $10y + 3 - (2y + 6)$

06. Write down the number of edges and vertices of a dodecahedron.

No of Edges :

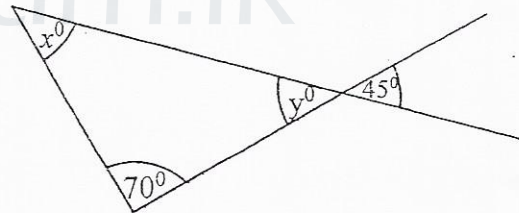
No of Vertices :

07. A person who is self employed has saved $\frac{1}{12}$ th of his monthly income. If his monthly income is Rs. 15 480, what is the amount saved by him?

08. Write down the reciprocal of $1\frac{7}{8}$.

09. Write the order of the rotational symmetry of a parallelogram.

10. Based on the information given in the figure, find the value of x and y.



11. Fill in the blanks with the suitable symbol from > or <.

(a) 2.5 t 2250 kg

(b) 0.6 t 750 kg

12. Express $4 \times (ab)^2$ as a product of powers

13. The ratio of boys to girls in a primary school is 20:19. If there are 300 boys in that school, find the total number of students in the school.

14. Solve. $\frac{x}{5} - 3 = 4$

15. A student obtained 18 marks out of 20 marks for a test paper. Express the marks obtained by the student as a percentage of total marks.

16. The surface area of a cube is 54 cm^2 . If side length of the cube is x , find the value x .

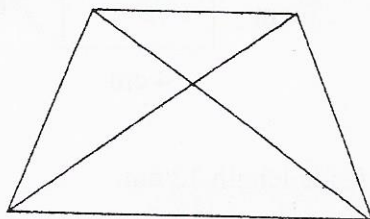
17. If the given sets are null sets, place '✓' mark, or else place 'X' mark.

A = {perfect square numbers which have digit 8 in the unit place}

B = {even prime numbers}

18. Find the factors. $4x^2y + 6xy^2 - 8xy$

19. Find the sum of all the interior angles of the triangles in the given figure.



20. Bangkok in Thailand is located in the (+7) time zone. When the time in Bangkok is 17:30, find the time in Sri Lanka located in the $(+5\frac{1}{2})$ time zone.

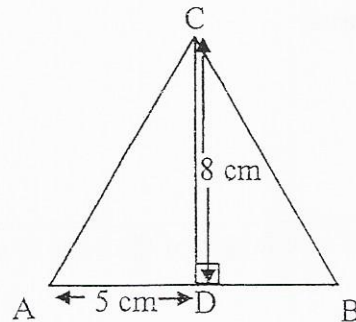
Part II

- Answer the first question and four other questions on a separate paper and attach it to the Part I.

- Question one carries 16 marks and all the other questions carry 11 marks.

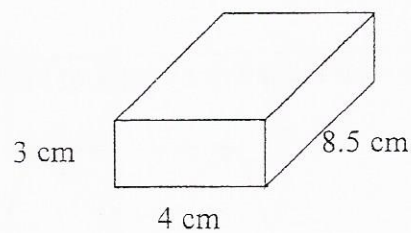
01. Answer the following questions based on the activity done in the classroom relevant to the lesson 'Area'.

(a)



The length of AB of the triangle ABC is 11 cm.

- Find the area of triangle ACD.
 - Find the length of BD.
 - Find the area of triangle BCD.
 - Find the area of triangle ABC.
 - Write the areas of the triangles ACD and BCD as a ratio and express it in the simplest form.
- (b) (i) Find the total surface area of the given cuboid.



- Find the total surface area of a cube of side length 12 cm.
 - A cuboid constructed by combining two such cubes mentioned in part (ii), find the total surface area of the constructed cuboid.
02. (a) Simplify.
- $\frac{6}{7} \times \frac{2}{3}$
 - $2\frac{2}{3} \times 1\frac{1}{12}$
 - $\frac{4}{5} \div 2$
 - $2\frac{2}{3} \div \frac{1}{6}$
- (b) The area of a rectangle is $9\frac{3}{4}$ m². If its length is $4\frac{1}{3}$ m, find the breadth of the rectangle.

03. (a) A donation worth Rs. 27 000 should be divided among Gamunu College, Parakkrama College and Vijaya College for their libraries in the ratio 3:5:4. Copy the following table to your answer sheet and fill in the blanks based on the given information.

	Gamunu	Parakkrama	Vijaya
Ratio	3	5	4
Fraction as a whole	$\frac{3}{12}$
Amount to be received	$27\,000 \times \frac{3}{12}$ = Rs. 6750

- (b) Sunil invested Rs. 40 000 and started a business on January 1st of a certain year. Three months later his friend Dulani joined the business by investing Rs. 50 000. The profit from the business for the year was Rs. 31 000.

- (i) Find the ratio in which the profit should be divided between them in its simplest form.
(ii) Find separately the profit received by Sunil and Dulani.

04. (a) Solve the equations given below.

(i) $8(y+6) = 40$

(ii) $\left(\frac{5-3y}{2}\right)+3 = 4$

- (b) Aloka has Rs. 20 more than the twice of the amount which Ruwan has. They have total amount of Rs. 110.

- (i) By taking the amount of Ruwan as x , express the amount of Aloka in terms of x .
(ii) By solving the equations, find the amount which each person has separately.

05. (a) Express the following fractions as a decimal number.

(i) $\frac{3}{5}$

(ii) $\frac{18}{40}$

- (b) Simplify

(i) 13.7×0.8

(ii) $45.5 \div 0.5$

- (c) If $378 \times 26 = 9828$, find the value of each of the following multiplications.

(i) 3.78×26

(ii) 37.8×0.26

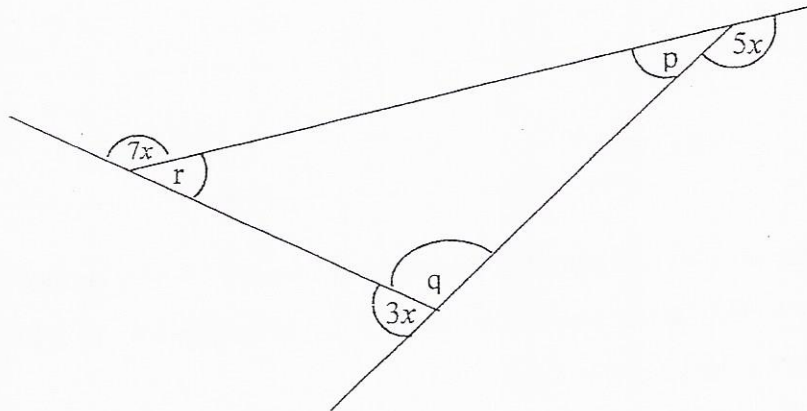
(iii) 3.78×2.6

(iv) 0.378×26

06. (a) Fill in the blanks.

- (i) The sum of the angles on a straight line is
- (ii) The sum of the interior angles of a triangle is
- (iii) The sum of the interior angles of a quadrilateral is
- (iv) The sum of the exterior angles of a triangle is
- (v) The sum of the exterior angles of a quadrilateral is

(b)



Based on the Information given in the above figure,

- (i) Find the value of x .
- (ii) Find the magnitudes of p , q and r .

07. (a) Fill in the blanks with \in or \notin as appropriate.

- (i) $5 \dots \dots \dots \{ \text{even numbers} \}$
- (ii) $4 \dots \dots \dots \{ \text{Counting numbers} \}$

(b) Express each of the following sets with its elements within curly brackets and write the number of elements in each set separately.

- (i) $A = \{ \text{Odd prime numbers less than } 20 \}$
- (ii) $B = \{ \text{The results obtained when flipping a coin} \}$
- (iii) $C = \{ \text{Letters of the word 'INDIA'} \}$
- (iv) $D = \{ \text{Perfect square numbers between } 10 \text{ and } 40 \}$

(c) Write an example for the set A where $n(A) = 1$.