

නාලන්දා විද්‍යාලය, කොළඹ 10 Nalanda College, Colombo 10 නාලන්දා විද්‍යාලය, කොළඹ 10 Nalanda College, Colombo 10 නාලන්දා විද්‍යාලය, කොළඹ 10 Nalanda College, Colombo 10 නාලන්දා විද්‍යාලය, කොළඹ 10 Nalanda College, Colombo 10



Nalanda College – Colombo 10

Revelation Test - 2020

Mathematics

Grade - 8

Time : 2 hours

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Name : Class : Index No :

Part - I

• **Answer all the questions.**

(1) Represent $\frac{18}{7}$ as a mixed number.

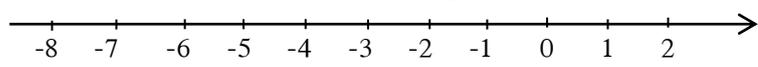
(2) Write 0.16 in fraction and express it in the simplest form.

(3) Solve $x + 7 = 20$

(4) Write the reciprocal of $1\frac{1}{4}$

(5) Express 12 % as a fraction.

(6) Find the value of $(-7) - (-5)$ by using the number line



(7) $24 \div 3 = 24 \times \square$ Fill in the blank.

(8) Write down the Euler's Relationship for the Octahedron.

(9) If $a = -4$, $b = 3$ then find the value of $a(2b - 1)$

(10) Arrange in ascending order.

$$(-3)^2, (-1)^2, 2^3, 10^2$$

(11) In a parallelogram, (i) number of axis of symmetry ?

(ii) number of order of rotational symmetry ?.....

(12) Write 324 as a product of its prime factors.

(13) Simplify

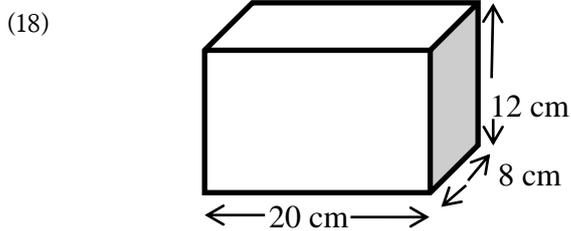
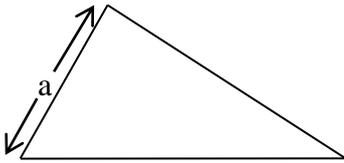
$$5(x - 2y) - x - y$$

(14) If the area of a square is 196cm^2 , Find the side length ?

(15) The mass of a stock of rice is 9.6 t. Find the mass of $\frac{1}{4}$ of it in kilograms.

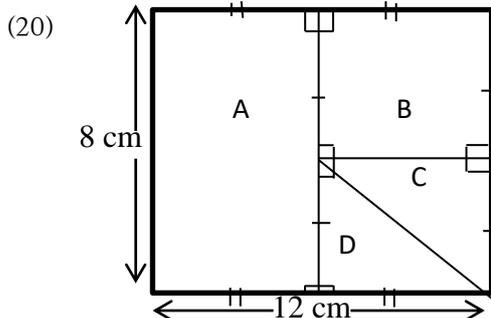
(16) The price of a book is Rs. 54.50 . How many books can be bought for Rs 436.00 ?

(17) To find the area of a triangle , create the perpendicular height corresponding to the base a.



Draw two different faces of the cuboid with measurements.

(19) When the time in West Indies in the (-4) time zone is 20 : 00 on Monday, find the times and the date in Malaysia.



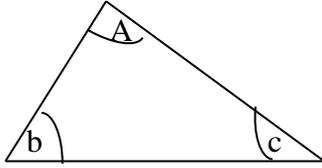
Create a composite plane figure by using the A,B,C,D parts and draw the diagram.

(2 x 20 = 40 marks)

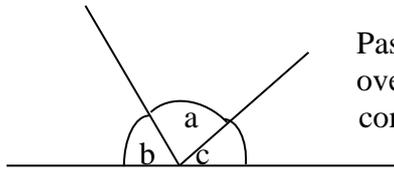
Part - II

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

(1) (a) Following activity performed by the students in the “ Triangles and Quadrilaterals ” lesson.



Cut and separate out the three angles a, b and c

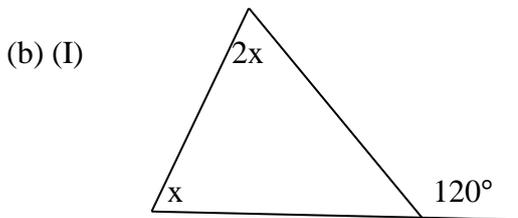


Paste the three angles a , b and c as shown in the figure, without overlapping them and such that the point P on the line is the common vertex.

- (i) What is the purpose of doing the above activity ? (01 marks)

- (ii) Write down the value of $a + b + c$ according to the activity ? (01 marks)

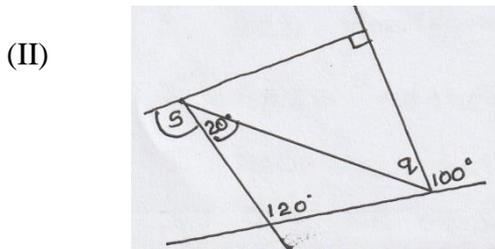
- (iii) What is the conclusion that can be arrived regarding the activity ? (02 marks)



Find the value of x and by using the answer show that,

$$x + 2x = 120^\circ$$

(06 marks)



Find the value of q and s

(04 marks)

- (III) Using the above figure in (ii) get the sum of the exterior angles of a quadrilateral. (02 marks)

(16 marks)

02. (a) Simplify

(i) $\frac{5}{12} - \frac{3}{8}$

(02 marks)

(ii) $\frac{3}{20} - \frac{5}{6}$

(02 marks)

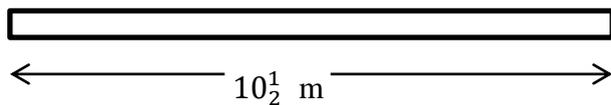
(iii) $1\frac{2}{3} \div \frac{5}{8}$

(02 marks)

(b) How many 250 g packets can be made out of $24\frac{1}{2}$ kg tea leaves ?

(02 marks)

(c)



The diagram shows a $10\frac{1}{2}$ m length strip on cloth. How many pieces of length $1\frac{1}{2}$ m can be cut from the cloth ? As shown in the diagram.

(03 marks)

(11 marks)

(3) (a) (I) Write $2\frac{1}{5}$ as a decimal number. (02 marks)

(II) Simplify $54 \cdot 32$ (02 marks)

$$\begin{array}{r} \underline{\times 1.5} \\ \hline \end{array}$$

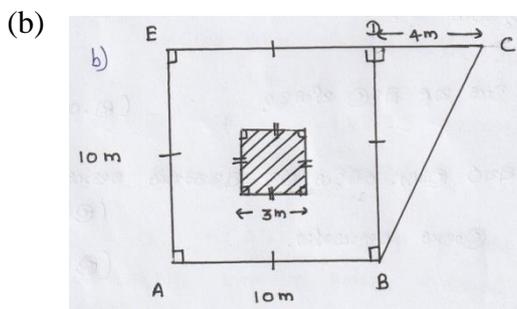
(III) Simplify $5.04 \div 2.4$ (02 marks)

(b) (I) When x is subtracted from 10 and multiply the answer by 3, the result is 6.
Construct a simple equation and solve it. (02 marks)

(II) Solve the equation $\frac{1}{5} (2x - 1) + 3 = 10$ (03 marks)

(11 marks)

(4) (a) If the length, breadth and height equal to 20 cm, 15 cm and 10 cm respectively.
Find the total surface area of the cuboid shape box without the lid.



The given figure shows a plan of a garden.

(I) Find the area of BCD triangular region. (02 marks)

(II) Find the area of ABDE square shape region. (02 marks)

(III) Find the area of shaded region. (02 marks)

(IV) If grass is planted in the shaded region, Find the are of remaining part ? (02 marks)

(11 marks)

(5) (a) Build a continued ratio.

A	B	C
2		3
<hr/>		4
=====		

(02 marks)

(b) Kamal and Nimal shared some money in the ratio 7 : 5 . When Kamal received Rs. 2100, how much money Nimal received ?

(02 marks)

(c) Amara starts a business in January 1st by investing Rs. 45,000. Sarath joins the business three months later by investing Rs. 75,000. The profit from the business at the end of the year was Rs. 100,000. $\frac{1}{10}$ was spent on the maintenance of the business and rest was shared between among them.

(I) How much money spent for maintenance ? (02 marks)

(II) Find the ratio in which the profit should be divided between Amara and Sarath. (03 marks)

(III) Find the amount received by Sarath. (02 marks)

(6) (a) (I) 45 minutes from 1 hour, express as a percentage. (02 marks)

(II) Out of 20 questions of a child who answered a question paper, 13 were correct. Find the percentage of correct answers.

(02 marks)

(III) Write the corresponding ratio for $2\frac{1}{2}$ % (02 marks)

(b) Out of 600 people live in a village, 20% watch educational programs and 65% watch teledramas. Other watch the news broadcast.

(I) Indicate the number of news viewers as a percentage. (02 marks)

(II) Find the amount of teledrama viewers ? (02 marks)

(III) How many people watch educational programs than news viewers ? (01 marks)
(11 marks)

(7) (a) (I) $A = \{ \text{the digits in the number } 13278 \}$
Listing the elements within brackets. (02 marks)

(II) Write the value of $n(A)$ (02 marks)

(b) Fill in the blanks using the appropriate symbols.

(I) $5 \dots\dots\dots \{ 2, 3, 5, 7 \}$ (01 marks)

(II) $1 \dots\dots\dots \{ \text{prime numbers} \}$ (01 marks)

(c) $B = \{ \text{polygons with less than three sides} \}$,
Write set B in another way. (02 marks)

(b) Write a set P in terms of common characteristics of its elements can be identified clearly,
when $n(P) = 3$ (03 marks)
(11 marks)