



Grade  
8

SECOND TERM TEST - 2019

SUBJECT Mathematics

School : .....

Name of the Student/ Index No : .....

Time : 2 hrs.

Part I

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

(01) Write next two numbers of the number pattern. 4, 9, 14, 19,.....

(02) Write the suitable value for the blank.

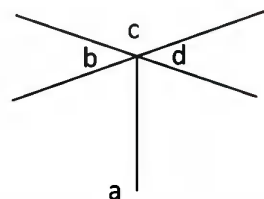
$$(-8) + (+3) = \dots\dots\dots$$

(03) Simplify  $\frac{x}{2} - 1 = 5$

(04) Draw the net figure of icosahedron and name the shape of a face which is used to make it.

(05) When the time in Bangkok in the +7 time zone is 16:00, find the time in Athens in Greece in the +2 time zone.

(06) According to the diagram, name an angle equal to "b".



(07) Nimal has a  $\frac{1}{5}$  of a certain amount of money. Express that as a percentage of the total amount.

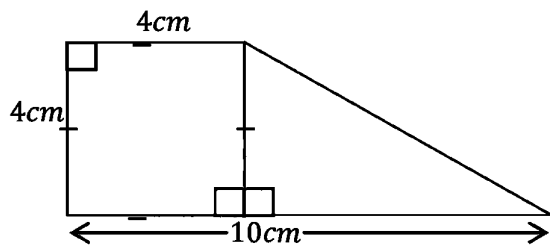
(08)  $A = \{ \text{letters in the word "RAJANGANAYA"} \}$   
 Write the elements of the cell A within curly brackets.

(09) Find the value of  
 $72 \div 0.6$

(10) By using the equation find the value of  $\sqrt{441}$

$$441 = 3 \times 3 \times 7 \times 7$$

(11) Find the total area of the following diagram.



(12) Find the factors  $ax + ay + 5x + 5y$

(13) The ratio between the number of cattle and goats in a farm is 5:4. If the total number of animals is 270, find the number of goats in the farm.

(14) Simplify,  $(-5)^3$

(15) Select the answer which can be the angles of a quadrilateral.

i.  $20^\circ, 50^\circ, 90^\circ, 100^\circ$

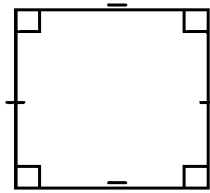
ii.  $80^\circ, 90^\circ, 60^\circ, 100^\circ$

iii.  $60^\circ, 120^\circ, 50^\circ, 90^\circ$

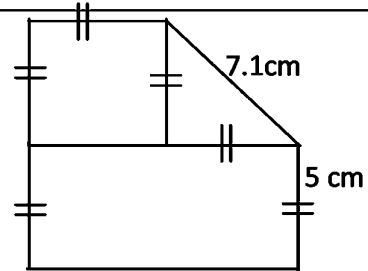
iv.  $120^\circ, 130^\circ, 50^\circ, 60^\circ$

(16) Write the reciprocal of  $3\frac{2}{7}$

(17) Write the order of rotational symmetry of the following square and mark the centre of rotation as "O".



(18) Find the perimeter of the following diagram.



(19) Fill in the blanks.

$$1\frac{1}{3} \div 1\frac{1}{9} = \frac{4}{3} \div \frac{\square}{9} = \frac{4}{3} \times \frac{\square}{\square} = \frac{6}{5} = 1\frac{1}{5}$$

(20) Express 2.075t in metric tons and kilograms.

## Part II

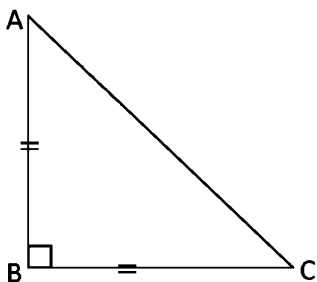
❖ Auswer 05 questions including the question 01.

(01) The following table shows how Tharindu and Kavindu invested money in a textile business in the past 3 years.

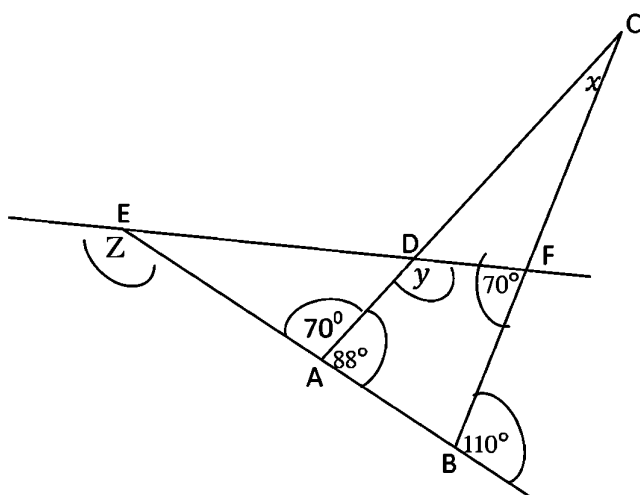
| year | Kavindu             |                                | Tharindu            |                                | profit |
|------|---------------------|--------------------------------|---------------------|--------------------------------|--------|
|      | Amount invested Rs. | Period of investment ( months) | Amount invested Rs. | Period of investment ( months) |        |
| 2015 | 80 000              | 12                             | 80 000              | 12                             | 90 000 |
| 2016 | 80 000              | 12                             | .....               | 12                             | 60 000 |
| 2017 | 80 000              | 12                             | 80 000              | 8                              | 40 000 |

- Write the simplest form of the ratio of which the money invested by Kavindu and Tharindu in 2015.(2 marks)
- Find the profit received by kavindu in 2015. (2 marks)
- If the ratio of money invested by Kavindu and Tharindu in 2016 is 2:1, find the amount invested by Tharindu (2 marks)
- Is it fair enough to divide the profit earned in 2016 equally between the two? Give reasons. (3 marks)
- Write two factors that should be considered when dividing the profit of a business.

- (02) a) i. Name the type of triangle according to the sides. (1 mark)
- ii. Name the type of triangle according to the angles. (1 mark)
- iii. Name the largest angle in the triangle. (1 mark)



b).

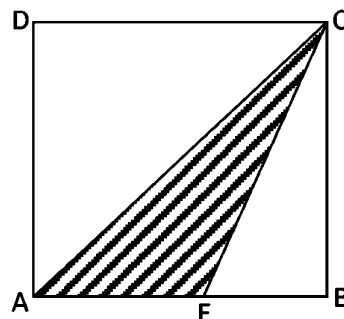


- i. According to the information given in the diagram, find the magnitudes of the following angles.
- a)  $x$  (02 marks)
- b)  $y$  (02 marks)
- ii. Name a vertically opposite angle to  $y$  . (02 marks)
- iii. Name a supplementary angle to the angle  $\hat{F}B$  . (02 marks)

(03) a) Find the total surface area of the cube of side length is  $4cm$  (03marks)

b) ABCD is a square of side length  $8cm$ . The midpoint of AB is E.

- i. Find the length of AE. (1mark)
- ii. Find the perpendicular distance of AEC triangle. (2 marks)
- iii. Calculate the area of AEC triangle. (2 marks)
- iv. Find the area of AECD quadrilateral. (3 marks)



(04) a)  $A = \{ 2, 3, 5, 7 \}$

i. Fill in the blanks with  $\in$  or  $\notin$  as appropriately.  
 $3 \dots \dots \{A\}$

(01 mark)

ii. Write the value  $n(A)$

(02 marks)

iii. Write an example for a null set.

(02 marks)

b)

i.  $1\frac{1}{4}$  cubes of soil is carries by a truck at one turn. Find the minimum number of turns it should take for carrying 15 cubes of soil.

( 3 marks)

ii. It is proposed to display banners for a blood donation campaign.  $1\frac{3}{4}m$  of cloth is needed to make one banner. Find the total length of the cloth that is needed for making 8 such banners .

( 3 marks)

(05) a) i. Tree bulbs, red, blue and yellow are lighting once in every 10 minutes, 15 minutes and 30 minutes respectively. If the 3 bulbs lit up together at 6.20 p.m. , at what time will they light up together again? (02 marks)

ii. If  $p = 5$  , find the value of  $3(2p - 6)$

(02 marks)

b) i. The daily wages of a person is Rs.  $x$  and overtime payment for one hour is Rs. 250. If Gamini works an extra one hour daily, write the algebraic expression for the amount of money he earned per day by using  $x$  (02marks)

ii. if the total income earned by Gamini working for 5 days is Rs.7500, write the equation including  $x$  .

(02marks)

iii. Calculate the daily wage of Gamini by simplifying the above equation.

(03 marks)

(06) a) A 5% of a bulk of electric bulbs bought by a seller was broken during transportation. If the number of broken bulbs is 20,

i. Find the number of bulbs bought by the seller.

( 2 marks)

ii. Find the number of unbroken bulbs.

(2 marks)

iii. If he bought one bulb for Rs. 80, find the total loss of this deal.

(2 marks)

b) i. The number of edges in a certain pyramid with a square shaped base is B. Write the number of faces and vertices of it.

(03marks)

ii. Write the Euler's relationship.

(02 marks)