

All right received

Zonal Education - Kegalle

3rd Term Test - 2019

Grade 7

Mathematics

Time : 2 Hours

Name / Index No. :

Grade :

Part 01

- Answer for all questions.
- Each questions carries 02 marks.

(01). Simplify

$$10 - 8 \div 2$$

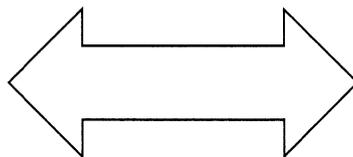
(02). 304□ is this number is divisible by 9, write down the suitable digit that can be put into the box.

(03). Simplify.

$$\begin{array}{r} l \quad ml \\ 2 \quad 300 \\ \times 6 \\ \hline \end{array}$$

(04). Write down the century to which the year 1872 AD belongs.

(05). Draw all symmetrical axes in this figure.



(06). $18 = 2 \times 3 \times 3$ Find the H.C.F of these two numbers.

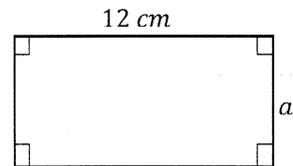
$$24 = 2 \times 2 \times 2 \times 3$$

(07). Simplify.

$$\begin{array}{r} Kg \quad g \\ 12 \quad 420 \\ - \quad 5 \quad 840 \\ \hline \end{array}$$

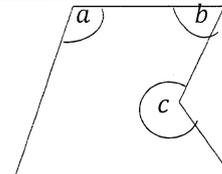
(08). Find the value of $2^3 \times 5$

(09). If the perimeter of this rectangle is 36 cm, find the value of a



(10). $\frac{2}{3}$, $\frac{1}{4}$, $\frac{5}{12}$ Write these fractions in ascending order.

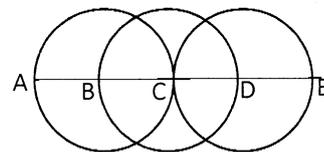
(11). Name a reflex angle in given figure.



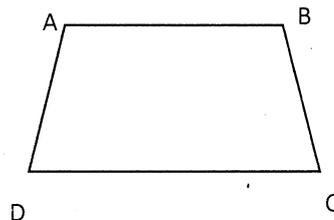
(12). Represent the set B as a venn diagram

$B = \{ \text{Odd numbers between 10 and 20} \}$ Type equation here.

(13). There are 03 equal circles in this figure. B,C and D are the centers of these circles. If $AE = 20$ cm, find the length of AD.

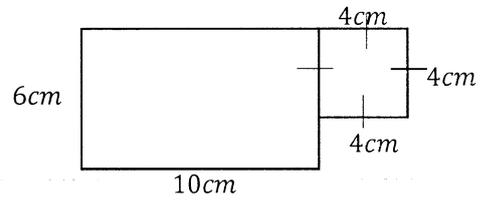


(14). Name a pair of parallel line in this figure.

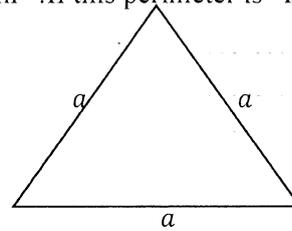


(15). There are 100 mangoes. 15 out of these mangoes are spoilt. Find the percentage of the mangoes which are not spoilt.

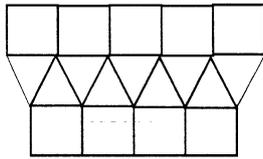
(16). Find the area of this figure.



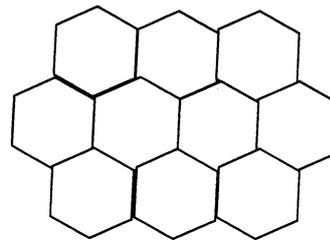
(17). There is an equilateral triangle with length of side is "a cm". If this perimeter is "P", build up an equation for "P".



(18) Name these tessellations using your knowledge about tessellations.



(i)



(ii)

(19). If $a = 4$

Find the value of $3a - 1$

(20). If $A = \{\text{Letter of the word "COLLEGE"}\}$

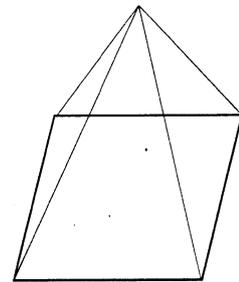
Write set "A" as list of elements within curly brackets.

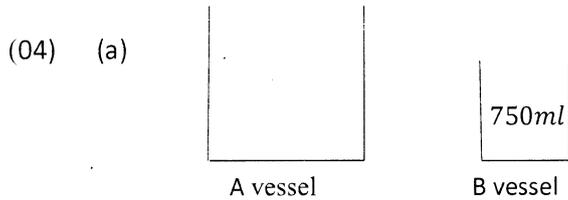
Part 11

Answer only 05 questions.

12 marks carries for each question (Total 60 marks)

- (01) (a) (i) Simplify 4.32×14 (03 marks)
(ii) Simplify $(-5)+(+3)$ (01 mark)
(iii) Simplify $(+8.5)+(-3.4)$ (02 marks)
- (b) Mr Perera plucked mangoes from mango trees in his garden. $\frac{2}{5}$ of mangoes are ripe and $\frac{45}{100}$ of mangoes are unripe and rest of mangoes are spoilt.
(i) Write as a percentage of number of ripe mangoes in total. (02 marks)
(ii) Write as a percentage of number of spoilt mangoes in total (02 marks)
(iii) Are most of these mangoes ripe or spoilt?
Give reason for your answer. (02 marks)
- (02) (a) (i) Draw a Cartesian plane with the both "x" and "Y" axes range from 0 to 7. (02 marks)
(ii) Plot the following points on the above Cartesian plane.
A(2,6) B(2,5) C(1,4) D(2,1) E(4,1) F(5,4) G(4,5) H(4,6) (03 marks)
(iii) Join the above points with straight line segment in order to obtain a closed figure. (01 marks)
- (b) (i) Simplify.
 $12m + 5n - 4m - 2n$ (02 marks)
(ii) When Rs.150 given to buy 5 oranges, Rs.15 balance received. Take the price of an orange as x rupees, build up an equation including x. (02 marks)
(iii) Simplify the equation (ii) find the price of and orange. (02 marks)
- (03) (a) (i) Write down number of edges, vertices and faces of the given square based pyramid (03 marks)
(ii) Write down Euler's relationship. (01 mark)
(iii) If a certain solid has 8 faces and 6 faces, find the number of edges of the solid using the Euler's relationship (03 marks)
- (b) Do the following constructions using the straight edge and the pair of compass.
(i) Construct a circle of radius 4cm. (02 Marks)
(ii) Construct a regular hexagon which are the vertices on the above circle. (03 marks)





Vessel A had 2L amount of soft drink. 750ml amount of soft drink put into another B vessel from A.

- (i) After that find the ratio between the amount of soft drink in vessel A and vessel B in simplest form. (02marks)
- (ii) When Amal and Kamal divide the soft drink in vessel B as the ratio is 2 : 3. Find the amount of soft drink each received. (03 marks)

(b) Simplify the following fractions.

(i) $\frac{1}{10} + \frac{2}{5}$ (02 marks)

(ii) $\frac{2}{3} - \frac{1}{6}$ (02 marks)

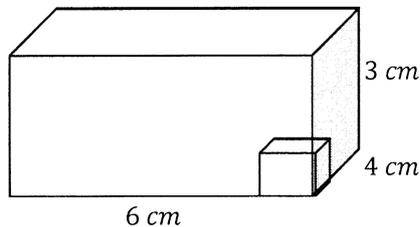
- (iii) When Amal goes to his friend's house, he goes $2\frac{1}{4}$ km by a three wheeler and rest of $5\frac{1}{2}$ km goes by bus. Find the total distance from Amal's house to his friend's house. (03 marks)

- (05) (a) (i) Express as a ratio, the scale diagram when 6m represent by 1cm (02 marks)
- (ii) In a map drawn to the scale 1:50000, find the actual length represented by 5 cm (02 marks)

(b) The length of a rectangular shaped assembly hall is 120m and its breadth is 30m.

- (i) Write a suitable scale to draw the scale diagram of the floor of this building. (02 Marks)
- (ii) Draw the scale diagram of the floor of the building using the selected scale. (05 marks)

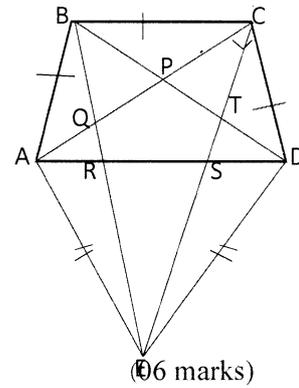
- (06) (a) The length, breadth and height of a rectangular shaped box are 6cm, 4cm, 3cm respectively.



- (i) How many small cube with 1 cm^3 can be packed in the bottom of this vessel? (02 marks)
- (ii) How many small cube with 1 cm^3 can be filled this vessel? (02 marks)
- (iii) Find the volume of the rectangular shaped wooden piece with length, breadth and height are 8cm, 5cm, 4cm respectively. (02 marks)

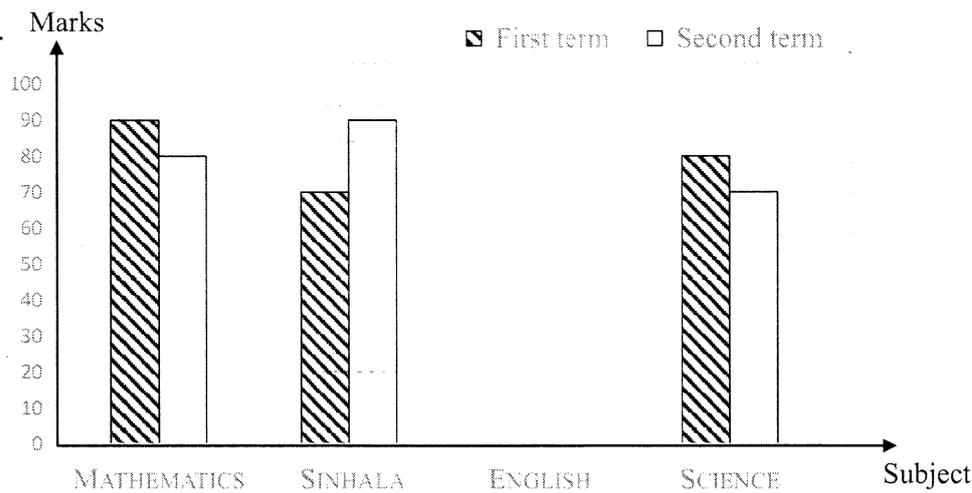
(b) According to the information in given figure, match the name of rectilinear plane figure given in column A to the relevant figure name with letters in column B

- | | |
|----------------------------|--------------|
| <u>A</u> | <u>B</u> |
| (i) Isosceles triangle | <i>PQRST</i> |
| (ii) Right angled triangle | <i>CDE</i> |
| (iii) Concave polygon | <i>CPBRS</i> |
| (iv) Pentagon | <i>ABC</i> |
| (v) Scalene triangle | <i>ABCD</i> |
| (vi) Convex polygon | <i>ACD</i> |



(06 marks)

(07) (a) The marks obtained by Pabasara during two terms for Mathematics, Sinhala, English and Science are shown in the multiple column graph.



- If she got 90 marks for English in first term and 80 marks in second term. Mark them on the above graph. (02 marks)
- Which subject is more progress first term than second term? (02 marks)
- What is the total mark she got in second term? (02 marks)

(b) Choose the below mentioned events according to the given table and write the suitable letter in relevant columns.

- Tossed a coin landing heads up.
- There are equal size of red buttons in a bag. Getting the button is red colour.
- Construct a triangle using only two straight lines.
- The sun rises from the East in the morning.

The events that definitely occur	The events that definitely do not occur	Random events

- Getting odd number by adding two even numbers (06 marks)