EDUCATION ZONE - COLOMBO
Second Term Test - 2012

Mathematics I

Grade 9

Time : Two hours

Name / Index No:- ....

Part A

Answer all questions.

(01) Write 7200 in scientific notation.

(02) If a number is rounded off to nearest 10, the answer is 70.
maximum number that could be ....
minimum number that could be ....

(03) Complete the box with a suitabale number.

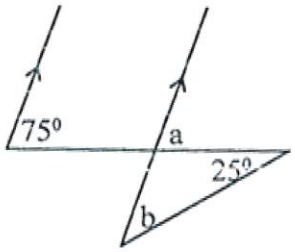
$1\frac{2}{3} \times \square = 1$

(04) Five 'Veralu' cost Rs. 1/= and four 'Veralu' was sold for Rs.1/= find the profit per one Veralu seed.

(05) If x = -2 and y = 3 , then the value of 3x +4y

(06) Factorize $2x^2 - 18y^2$

(07) Find the magnitudes of a and b.



(08) Find the equation of the straight line which passes through the points (0,3) and (-3,0)

(09) Simplify and write the answer in positive index form.

$$\frac{a^{-2} \times b^{4}}{b^{2}}$$

(10) Make the subject b of the formula

$$c = \frac{a + b}{2}$$

(11) If one American dollar is Rs 113, how many American dollers can be bought for Rs. 33900.

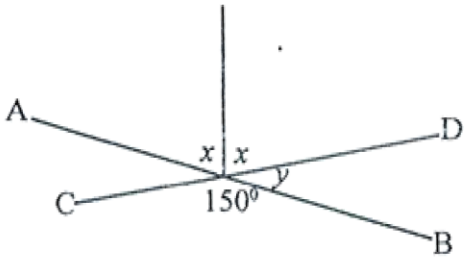
(12) Write the genaral term of the number sequence

4 , 7 , 10 , 13 , ,.....

(13) Find the value of $\frac{1}{10^{-3}}$

(14) Calculate the interest to be paid for a loan Rs.8000 for 8% annual rate of interest for six months.

(15) AB and CD are straight lines of the given figure. Find the magnitudes of x and y.



(16) The following order gives the used keys of a calculator by a student. Write the result he gets in the cage given.

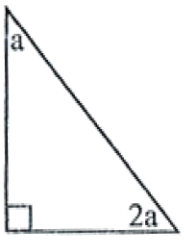
on	8	+/-	×	4	=	

(17) Give cordinates of the intersection point of the straight line x = -3 and y = 1

(18) Solve

$$\frac{x - 2}{5} = 4$$

(19) Find the magnitude of the angle a of the given right angled triangle.



(20) Construct the locus of a point moving 3cm away from the line AB.

A ——————————— B

Grade 9 - Maths - Part B

Answer the question 01 and four other questions.
Marks for the question 01 and 11 marks each for other questions.

(01) Answer the following questions by recalling the knowledge of the activity based equations and formulae in the classroom.

(i) Write two equations you found in mathematics and science text book.

(ii) Give two types of equations you have learnt.

(b) Linear symultanious equations can be solved by making one variable as the subject.

(i) Make x the subject of the given two equations.

$x - 2y = 1$

$x + y = 7$

(ii) Get the solutions of the above two equations by that method.

(c) The price of a pen is Rs. 4 less than three times of the price of a pencil.

(i) If the price of a pencil is x, then write an algebraic expression for the price of a pen.

(ii) If two pens and 3 pencils cost Rs. 55,construct an equation.

(iii) By solving the above equation find the price of a pen and a pencil.

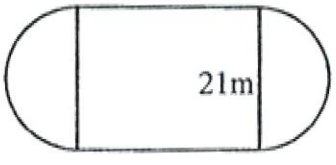
(02) The figure gives a rough sketch of a running track. It includes a rectangular shape and two semi- circles. The length of the rectangular part is 67m and breadth is 21m.

(i) Write the diameter and the radius of the semi- circular part.

(ii) Calculate the distance of the semi- circular track.

(iii) Find the total length of the track

(iv) Find the number of rounds to run around this track to run 1.5km.



(03) The following is a bill issued by a shop

Goods	Price (Rs.)
3 Cakes of soap	63.00
4 Caconuts	138.00
750m*l* coconut oil	180.00
1pkt of milk powder	219.00

(i) What is the total cost of the bill.

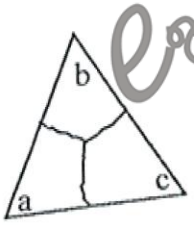
(ii) Calculate the price of 5 cakes of soaps.

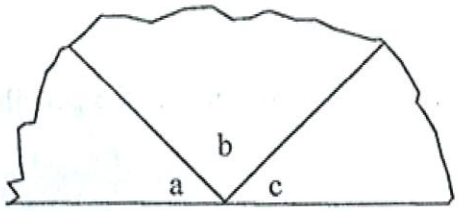
(iii) If the trader gets 15% profit by selling coconuts, find the buying price of a coconut.

(iv) Give the price of coconut oil as a percentage of the total bill.

(v) If 10% discount is given to the bill, explain that Rs.550 is enough to pay the bill.

(04) (a) The following is a mathematics activity done by a student in the classroom.

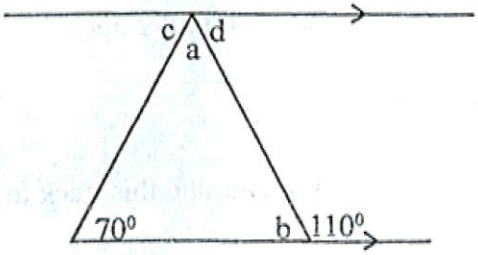




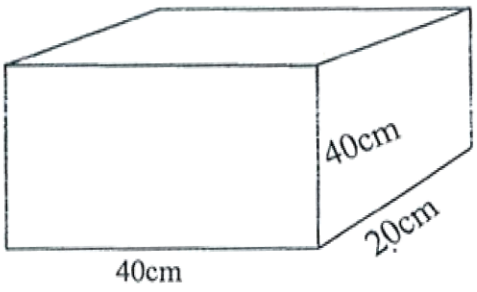
(i) Write the theorem you obtain from this activity based on a triangle.

(ii) Give the relationship between the angles A, B , and C

(b) Find the magnitudes of the angles a, b, c and d by giving reasons.



(05) (a) The diagram shows a cuboid shape glass tank of length 40m , breadth 20cm and height 40cm.



(i) Find the volume of the tank.

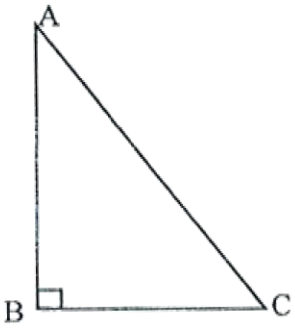
(ii) Give the capacity of the tank in litres.

(iii) To make the capacity 40*l* what should be the new height to prepare this tank again without changing the area of the base of this tank.

(b) AB = 9cm and AC = 15cm of the right angled triangle ABC

(i) Copy the diagram and mark data.

(ii) Calculate the length of BC.



(06) Construct the following by using the compass and cm/mm straight edge.

(i) Draw line segment AB = 7cm.

(ii) Construct the angle $B\hat{A}C = 120^0$ and mark AC = 8cm and complete the triangle ABC.

(iii) Construct the locus of the point moving equi - distant to the straight lines AB and AC.

(iv) Mark the intersection point of the above locus and the side BC as O . Write the geometrical name of that locus.

(v) Measure the length AO and write.