WP/Jaya/ Samudradevi Balika Vidyalaya - Nugegoda

First Term Test - 2012

Mathematics

Grade 10

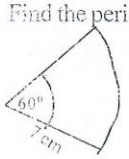
Marks:

Class .....

Name:..... Time : 2 hours

Part -I

Answer all the questions

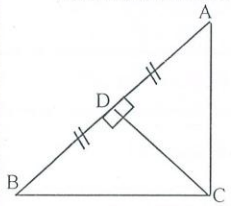
01. Find the value of (- 2) x (-3) x (-4)	02. write the ratio 2:3as a fraction.
03. Symplify $0.9 - \frac{2}{10}$	04. Fill in the blanks by using the symbol '>' or '<' (-5) ..... (-3)
05. Simplify 7.301 + 73.01	06. Find the perimeter of the sector. 
07. Factorise $9x^2 - 4$	08. Find the value of $(2a^2 - b)$ when a = 2, b = (-3)

09. Solve $2 + \frac{x}{5} = 3$

10. Arrange in to ascending order

$\frac{3}{5}$, $\frac{3}{7}$, $\frac{3}{11}$

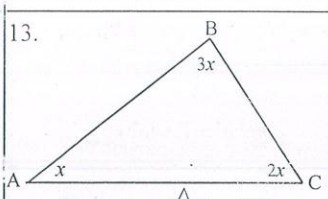
11. ACD and BCD triangles are congruent. What is the case of the congruency?



12. Select recurring decimals of the followings.

$\frac{1}{3}$, $\frac{11}{8}$, $\frac{2}{5}$, $\frac{22}{7}$

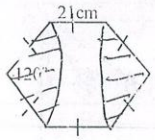
13.



Show that $A\hat{B}C = 90^0$ by using the data of the diagram.

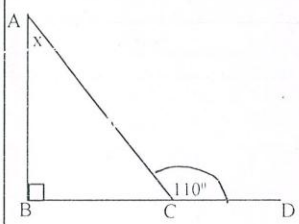
14. Factorise $2x^2 - 6x - 3(x - 3)$

15. Find the area of the shaded parts in the regular hexagon. Length of one side is 21cm'

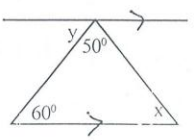


16. There are 7225 trees in a fruit garden. Trees are planted according ro the no of colums and no. of raws are equal. Find the no of trees in a raw.

17. Find the value of x



18. Simplify $1\frac{1}{5} \div (\frac{4}{5} - \frac{1}{5})$

19. Find the least common multifle $5xy$, $2xy^3$ $10x^2y$	20. Find the value of x and y 

Part II

- **Answer all the questions.**

01) Recall the instrument of preparing a booklet named "Mathematics for daily life"

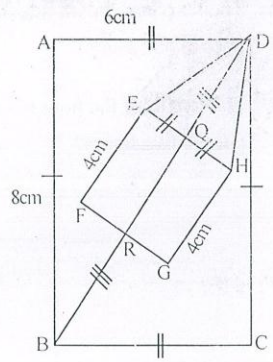
i. There are three relevant subject contents in this instrument. Write down them.

ii. In this instrument, you noted down your experiences daily in the table. From where did you obtain these information?

iii. Write two challenges you faced in preparing a booklet named' Mathematics for daily life'

iv. Write two experiences you got in preparing the booklet.

02) The diagram shows ABCD rectangular lamina 8cm long and 6cm wide. DEFGH pentagon was cut out and it's axis of symmetry is BD diagonal and DQ = BR. DEFGH pentagon consists of EFGH square 4cm and EDH isosceles triangle.



i. Find the area of ABCD lamina.

ii. Find the length of BD.

ii. What is the length DQ?

iv. Find the area of the pentagon.

v. What is the area of the remaining part?

03) In the triangle $A\hat{B}C$, $A\hat{B}C = A\hat{C}B$. The bisector of the angle $B\hat{A}C$ meet BC at X.

i. Draw a diagram and mark the given data.

ii. Prove that the triangles ABX and ACX are congruent.

iii. Show that $A\hat{X}B = 90^0$

04)

i. Factorise $x^2 + x - 6$

ii. Find the value of $2x \times 3y$ when $x = -1/2$ and $y = 1$

iii. Find the value of $\sqrt{23 \times 33 + 25}$ by using the knowledge of factors.

iv. Find the first approximation of $\sqrt{24}$

05) A. A man travelled 3/7 of a journey by bike and ½ of the remaining part travelled on foot.

i. Write the travelled length as a fraction.

ii. What is the remaining length that he has to go?

B. Art, Dancing and Music candidates in O/L examination of a school are in the ratio 2:3:4.

i. write music candidates as a fraction,

ii. If the no of dancing candidates is 84, Find the total no of candidates.

06) The diagram shows the time in the clock of a student came back to the home

i. What is the time represents on the clock.?

ii. Write the shaded part as a fraction?

iii. Write an expression for the area of the shaded part of the circle radius r cm.

iv. The length of the minute hand is 7cm. What is the distance that the minute hand of a clock goes in one round?

v. The length of the hour hand is 3.5cm. What is the distance of the hour hand of a clock goes in two hours?