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කඩුවෙල කොට්ඨාසය - Kaduwela Division

දෙවන වාර පරීක්ෂණය 2019
 Second Term Test 2019

ගණිතය
 Mathematics

9 ශ්‍රේණිය
 Grade 9

නම / විභාග අංකය :-
 Name / Index No :-
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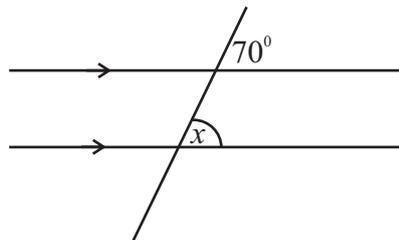
පැය දෙකයි.
 Two hours.

Part I

- Answer all the questions 1 to 20 on this paper itself.
- Each question carries 2 marks.

01. Scientific notation of the number 0.068 is,
 (i) 6.8×10^2 (ii) 6.8×10^{-2} (iii) 0.68×10^1 (iv) 6.8×10

02. Find the value of "x"



03. Find the value of $\frac{5}{8}$ of 1000 l.

04. Find circumference of a circle when its radius is 14 cm.

05. Find the factors of $x^2 - 16$

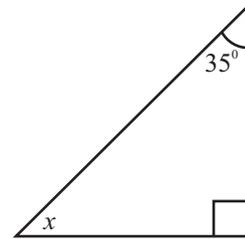
06. Write the gradient and intercepts of $y = 2x - 5$

07. Simplify $(3 - x)(x + 4)$

08. The employee is received Rs. 15000 for 10 days. Find the salary is received 3 days.

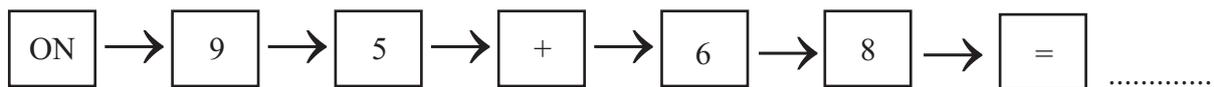
09. Find the value of the expression $(3 - x)(2 + x)$ when $x = (-4)$

10. Find the value of x



11. Write $3x^{-2}$ as a positive index.

12. The order in which the keys need to be pressed to find the value of the following. Fill in the blank according to it.

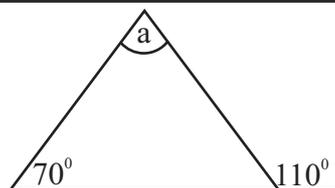


13. The height of a tree is 5.47 m. Round of this value,

- I. To nearest whole number
- II. To nearest 1st decimal place

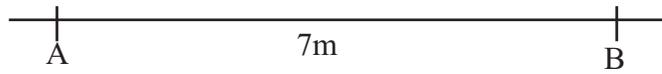
14. What is the volume of tank in litres, when the length breadth and height are given 30 cm, 40 cm and 10 cm respectively.

15. Find the value of a

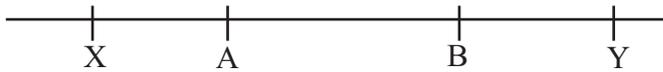


16. Sanduni received 120 Euro from her father. Find the total amount in Sri Lankan rupees. When 1 Euro is Rs. 195.

17. The distance between two houses A and B is 7m. A lamp post is fixed between two houses which is equidistant to A and B and 4m away from A. Using knowledge of loci find the suitable place to fix the lamp post.

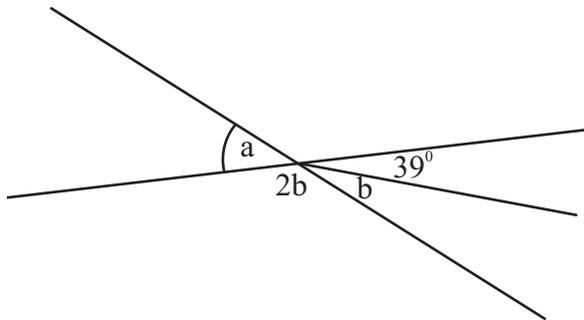


18. In given diagram $XA = BY$. If $XY = 20$ and $BY = 4$ cm, find the length of AB.



19. The cost of television is Rs. 28,000. If 10% profit is marked on the cost of television, calculate the selling price of it.

20. Calculate "a" and "b" in given diagram.



(2 mark x 20 = 40 marks)

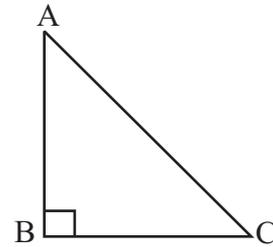
Part II

- Answer the first question and another four only.
- First question carries 16 marks and the other question carry 11 marks each.

01. (a) The Pythagoras relation is useful for real life application related to geometrical concept of rectilinear plane figures.

(i) In $\triangle ABC$,

- Name the sides that include the right angle.
- Name the hypotenuse.
- Write the relation between AC and other two sides.



(b) Use only cm/ mm straight edge and a pair of compasses to do this construction.

- Draw a straight line segment with 8 cm and name it as AB.
- Construct an angle 60° at A on AB.
- Mark the point C such that AC = 5 cm on the constructed line.
- Construct the locus of a point moving equidistance to A and B.
- Construct the locus of point equidistance to AC and AB.
- Mark the intersected point of above (iv) and (v) as L
- Draw a circle with centre L and the radius as LA.

02. (a) Simplify $(2\frac{1}{3} \div 1\frac{7}{6}) \times \frac{1}{4}$

(b) The general term of a number sequence is $3n - 1$. Which term is 113.

(c) Convert 48_{ten} into binary numbers.

03. (i) Solve the following simple equations.

(a) $\frac{x+1}{2} - \frac{3-2x}{3} = 7$

(b) $4 \{3(x-1) - 1\} = 20$

(c) Solve the simultaneous equation and find the value of "a" and "b"
 $3a + 2b = 7$
 $a - 2b = 1$

04. (i) Simplify.

(a) $\frac{4x^2 \times 3x^3}{6x^2}$

(b) $\frac{(a^2)^2 \times a^6}{a^3}$

(ii) Write the following numbers general form.

(a) $3.2 \times 10^{-2} = \dots\dots\dots$

(b) $4.2 \times 10^3 = \dots\dots\dots$

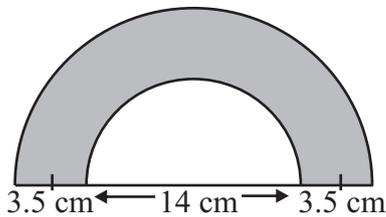
(iii) Write the following numbers in scientific notation.

(a) 49500 = $\dots\dots\dots$

(b) 0.726 = $\dots\dots\dots$

(c) 0.0368 = $\dots\dots\dots$

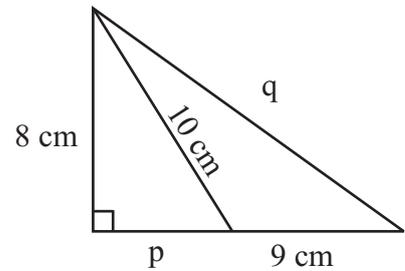
05. (a) The house badge is prepared for "Hansa house" to fix inform of their house in the inter house sports meet is given in the diagram.



(i) Find the radius of a large circle.

(ii) Find perimeter of shaded part.

(b) Find the length of p and q in given diagram.

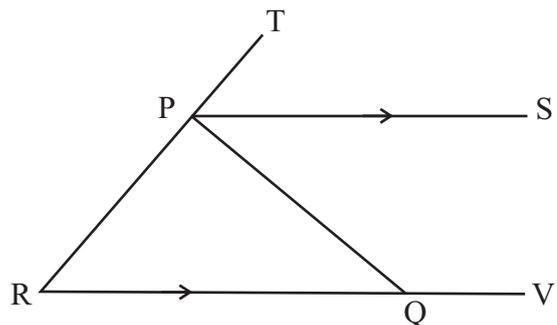


06. (a) In given diagram PQ is the bisector of \hat{SPR} and PS is parallel to RQ.

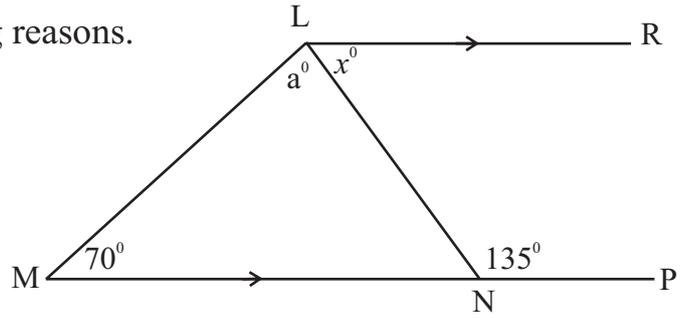
(i) Name two angle equal \hat{SPQ} .
Write the reason.

(ii) Name an angles equal to \hat{SPT} ,
give the reason.

(iii) Write a relation with \hat{QPT} and
interior angles of triangle.



(b) Find the value of a , x with giving reasons.



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07. (a) An incomplete table of values prepared to draw the graph of the function $y = 2x - 4$ is given below.

x	-3	-2	-1	0	1	2
y	-10			-4	-2	0

- (i) Fill in the blank.
- (ii) Draw the graphs of above function.
- (iii) Write the equation of the straight line which is parallel to above and passes through the point $(0, 0)$
- (iv) Make the subject as "y" of $P = \frac{yt}{(y+a)}$