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முழுப் பதிப்புரிமையுடையது]
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Western Provincial Education Department

පළමුවාරඇගයීම - 2018
முதலாவதுதவணைமதிப்பீடு - 2018
First Term Evaluation - 2018

10ශ්‍රේණිය தரம் 10 Grade 10	**ගණිතයI පත්‍රය** கணிதவினாதாள் - 1 Mathematics Paper - I	***පැයදෙකයි*** இரண்டுமணிநேரம் *Two Hours*

Name/ Index No: .....

.....
Signature of Invigilator

Important:

- This paper consist of 8 pages
- Write your **index no** correctly in the appropriate place on the **page one** and **page three.**
- Answer all questions **on this paper itself.**
- Use the space provided under each question for working and writing the answer.
- It is necessary to write relevant steps and correct units.
- Marks will be awarded follows : 02 marks each for questions 1 – 25 in part A 10 marks each for questions in part B.

For marking examiner's use only

Question number		Marks
A	**1 - 25**	
B	**1**	
	2	
	3	
	4	
	5	
Total		

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Part A

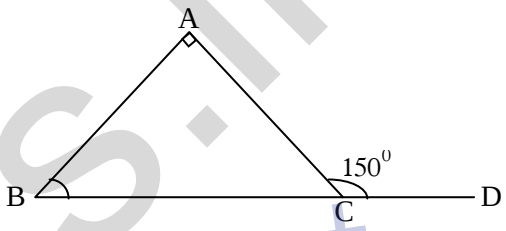
Answer all the questions on this paper itself.

1) the most suitable value for $\sqrt{7}$ is,

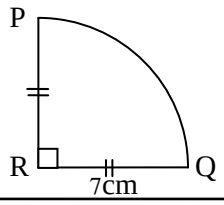
a) 2.5 b) 2.6 c) 2.7 d) 2.8

2) Factorize. $x^2 - 5x + 6$

3) According to the information given in the figure, find the value of $A\hat{B}C$



4) According to the information given in the figure, calculate the PQ arc length.

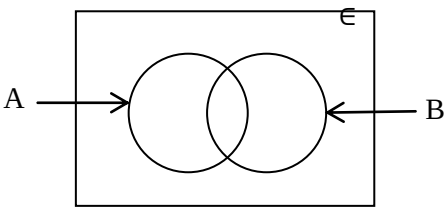


5) Express in logarithmic form.

$2^3 = 8$

6) Find the least common multiple of $2ab$ and $3a^2$.

7) Shade the region $(A \cup B)'$, in the given Venn diagram.



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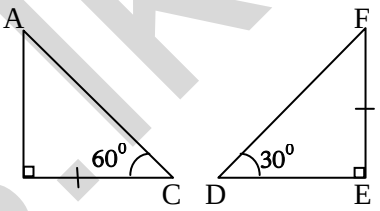
8) Simplify $\frac{1}{x} + \frac{2}{3x}$

9) Kamal loaned Rs. 40000 for 3% of monthly simple interest rate. How much will he receive as the interest after a month?

10) Are the two triangles shown in the figure congruent? If so state the case of congruent.

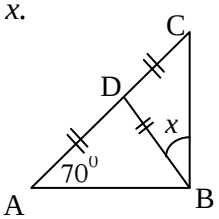


11) Write down two positive integers which satisfy the inequality, $x - 1 < 2$.

12) Number of bananas in 7 combs of bananas are given below. Find the median of it.
12, 08, 15, 09, 11, 13, 10

13) In a certain box there are 2 blue pens, 4 red pens and 3 black pens. What is the probability of the pen taken out randomly is being a red pen?

14) According to the information given in the figure, find the value of *x*.



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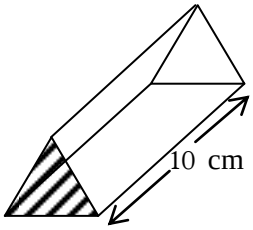
15) Solve. $\frac{x}{2} - 1 = 1$

16) Area of the shaded region of the prism is 40 cm^2 and the length of it is 10cm. Find the volume of the prism.

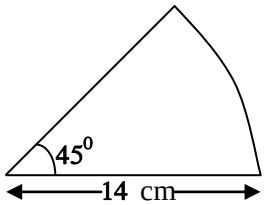


17) 9 men can complete a work in 4 days. How many men are needed to complete the same work in 6 days?

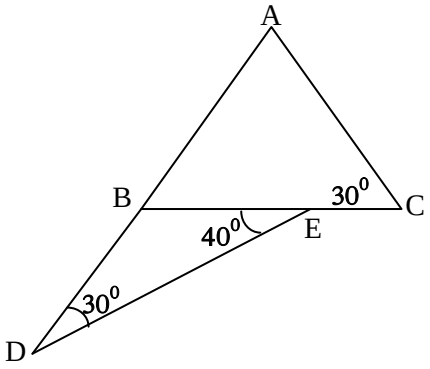
18) if the following statements are true put ✓and if they are wrong put ×in the given box.

If two triangles are coincide, they are congruent.	
If two sides and the included angle of a triangle is equal to the two sides and any angle of another triangle, they are congruent.	

19) Find the area of the sector given in the figure.



20) According to the information given in the figure, find the magnitude of$B\hat{A}C$.



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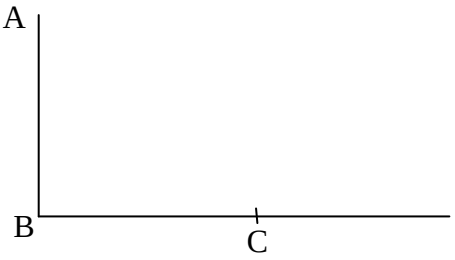
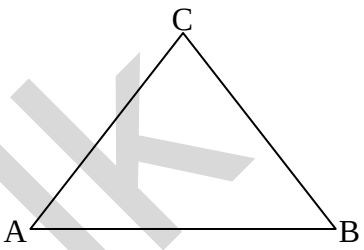
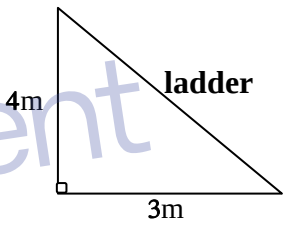
21) When observing from A, angle of depression of C is 40^0. Show this information on the given diagram. (Ignore the height of the observer)



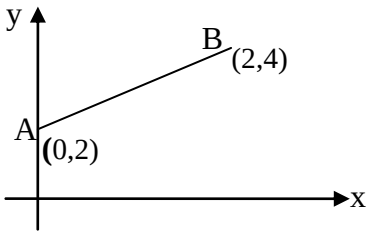
22) ABC is a triangular shaped land. A lamp post is needed to be fixed on BC, equidistant to AB and AC. Mark the location of the lamp post (D) on the diagram.



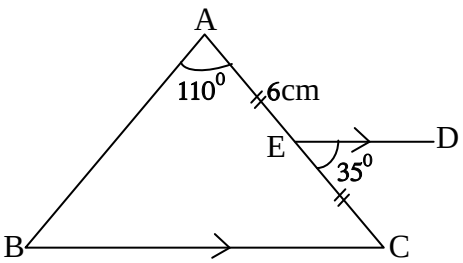
23) A ladder is leaned to a wall as shown in the figure. The distance between the foot of the ladder and the wall is 3m. Find the length of the ladder.



24) According to the information given in the figure, find the gradient of AB straight line.



25) According to the given information, if AE = 6cm, find the length of AB.



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Part B

Answer all the questions on this paper itself.

01) From a stock of clothing materials which were bought to saw shirts and shorts, $\frac{3}{7}$ was used to saw shirts.

i. What fraction of the stock is remaining after sawing the shirts?

* $\frac{1}{4}$ of the remaining is used to saw shorts.

ii. What fraction of the whole stock is used to saw shorts?

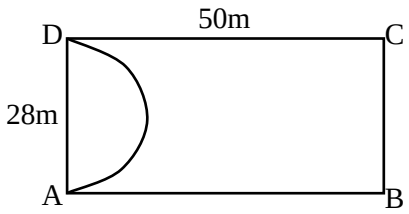
iii. What fraction of the whole stock is remaining, after sawing the shirts and the shorts?

iv. If the remaining stock of material is 6m, find the total length of the material bought.

v. If 1m of the material costs Rs. 200, find the value of the stock of clothing material bought.

02) ABCD is a rectangular shaped land.

i. Find the area of the land.



ii. According to the figure, flower is planted on the semi-circular portion with the diameter AD. Find the perimeter of the flower bed.

iii. A right angle triangular shaped pond with the area $70m^2$ is needed to be build inside the land, by taking BC and CD as borders. the base of the triangle should be BC. Draw the sketch of the pond with the relevant measurements on the diagram.

iv. Find the area of the remaining portion of land after reserving for the flower bed and for the pond.

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04) In a vehicle manufacturing company, 15 men canmanufacture a motor car in 9 days.

i. Find the number of man days needed to manufacture a motor car.

After working three days 5 men from the above 15 has taken sick leave.

ii. Find the magnitude of work done in first three days.

iii. How many more days are needed for the remaining 10 men to complete the work?

iv. If the labor cost per day for a worker who works on manufacturing motor car is Rs. 3 500, find the difference between the salary earned by a worker who has taken leave and the salary earned by a worker who hasn't taken leave.

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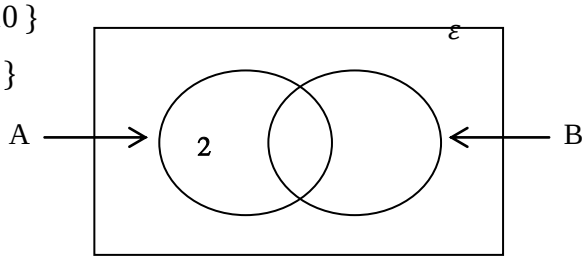
04) ε = {Whole numbers from 1 to 9 }

A = {Prime numbers between 0 and 10 }

B = {Odd numbers between 0 and 10 }



i. Write the elements of the set ε

ii. Write the elements of the set A.

iii. Write the elements of the set B.

iv. Represent the above information on the Venn diagram.

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v. Find $n(A), n(A') \text{ and } n(\varepsilon)$. Hence write the relationship between $n(A), n(A') \text{ and } n(\varepsilon)$

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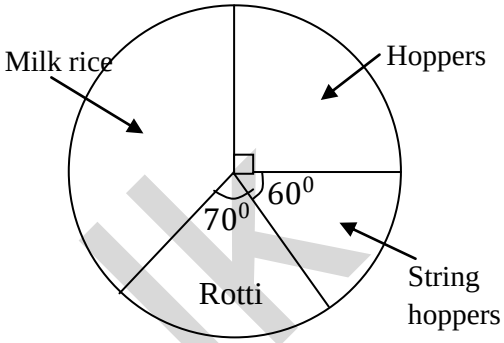
05) The following pie chart illustrate the information on the types of food a group of student preferred.



i. What fraction of the whole group prefer hoppers?

ii. If 45 students prefer hoppers, how many students were participated for the survey?

iii. Find the angle at the centre of the sector which denotes the students who prefer milk rice.

iv. How many students prefer milk rice?

v. If 5 students who has selected rotti changed their food item to milk rice, what is the relationship between the number of students who prefer rotti and the number of students who prefer string hoppers?

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