බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව බස්නා මேல් மாகாணக் கல்வித் திணைக்களம் மேல் மா Department Of Education – Western Province De බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව බස්නා மேல் மாகாணக் கல்வித் திணைக்களம் மேல் மா Department Of Education – Western Province De	**බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව** **மேல் மாகாணக் கல்வித் திணைக்களம்** **Department of Education – Western Province**	ళ් லாத் அ‌ஞ்ஞாஸன‌ দெপার্তমেন්து‌ව் ‍‌ బస்நாகிர పళాత් கல்வித் திணைக்களம் மேல் மாகாண‌க் கல்வித் தி Department Of Education – Western Province Dep ళ් లාත් அ‌ஞ்ஞாஸன‌ দெপার্তমেன්து‌ව் ‍‌ బస்நாகிர పళాత් கல்வித் திணைக்களம் மேல் மாகாண‌க் கல்வித் தி Department Of Education – Western Province Dep

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<tr><td colspan="4" align="center">අවසාන වාර ඇගයීම
ஆண்டிறுதி மதிப்பீடு   - 2019
Third Term Evaluation</td></tr>
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ශ්‍රේණිය தரம் Grade } 10	විෂයය பாடம் Subject } **Mathematics**	පත්‍රය வினாத்தாள் Paper } I	කාලය காலம் Time } 2 Hours

Name / Index number ---

Signature of Invigilator

Important:

- This paper consists 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	

....

Marked by

Part A
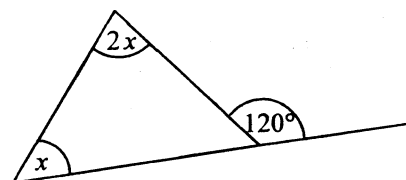### Answer all the questions on this paper itself.

01. When an electrical item worth Rs.75 000 is imported, 20% of its value has to be paid as customs duty. Find the value of the electrical item after paying the duty.

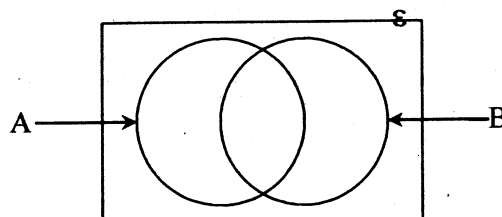**02.** Simplify. $\dfrac{5}{P} - \dfrac{3}{4P}$

03. Write in index form. $\log_a x = y$

04. According to the given information, find the value of x.

**05.** Shade the region $A' \cap B$ in the given Venn diagram.

06. Solve. $\dfrac{x + 2}{3} = 5$

07. Find the least common multiple of 18 and 12 $x^2 y$.

08. Center of the given circle is O. According to the given information, find the values of x and y.
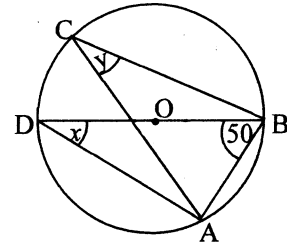
09. Find the distance that a car which travels at a uniform speed of 84 kmh^{-1}, covers in 5 minutes.

10. In the given figure, $B\hat{A}C = B\hat{D}C$. Write a pair of angles that should be equal to make the two triangles congruent under A. A. S case.
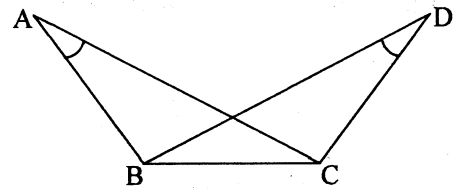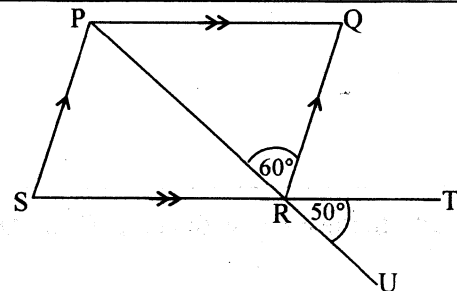
11. Curved surface area of a cylinder with the area of the base 14 cm is 704 cm^2. Calculate its height. (Curved surface area of a cylinder with the radius r and the height h is 2πrh)
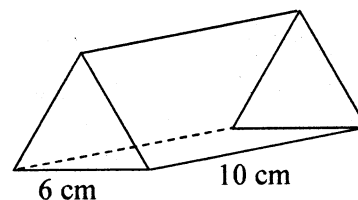
12. Solve. $x(x-3) = 0$

13. In the parallelogram PQRS, side PR is produced to U and side SR is produced to T. $T\hat{R}U = 50°$. $P\hat{R}Q = 60°$. Find the magnitudes of $S\hat{R}P$ and $S\hat{P}Q$.

14. X and Y are mutually exclusive events. If $P(X) = \frac{1}{4}$ and $P(Y) = \frac{1}{3}$ find $P(X \cup Y)$.

15. If the area of the cross section of the given prism is 10 cm^2, find its volume.
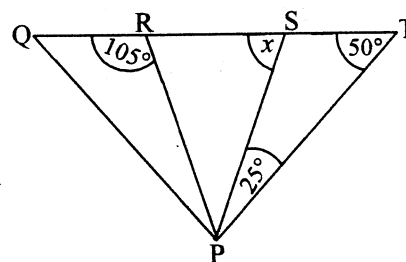
16. Write down the gradient and the intercept of the straight line $3y = 6x + 2$.

17. In the figure, if $Q\hat{R}P = 105°$, $S\hat{P}T = 25°$, $S\hat{T}P = 50^0$
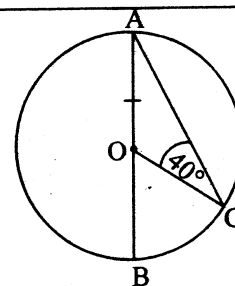
   (i) Find the value of x.

   (ii) If SP = 8 cm, find the value of RP.

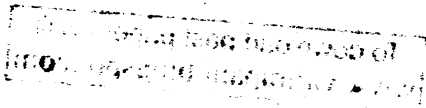**18.** Obtain the first approximation of $\sqrt{44}$.

19. Find the factors. $x^2 - 6x + 8$

20. In the circle with center O, if $A\hat{C}O = 40°$ find the value of $B\hat{O}C$.

21. Food sufficient for 12 days for 20 cows has been stored in an animal farm. If 4 cows were taken away from the farm, for how many days will the food be sufficient?
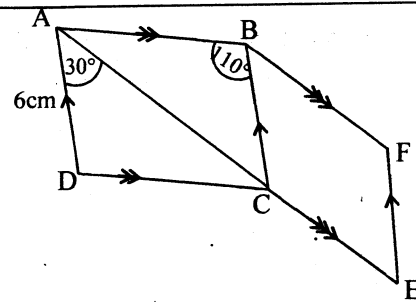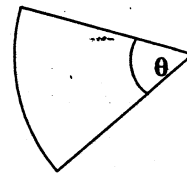
22. Solve. $8 - 3x > 29$

23. According to the information given in the figure,
(i) Find EF length.

(ii) Find the value of $A\hat{C}D$.

24. The perimeter of the given sector is 39 cm and the arc length of it is 11 cm. Find the radius of the sector.

25. A , B and C are three flower shrubs. Another flower bush is needed to be plant equidistance to those three shrubs. An incomplete diagram which is drawn to locate the relevant place is shown in the figure. Complete the diagram and find the relevant place.
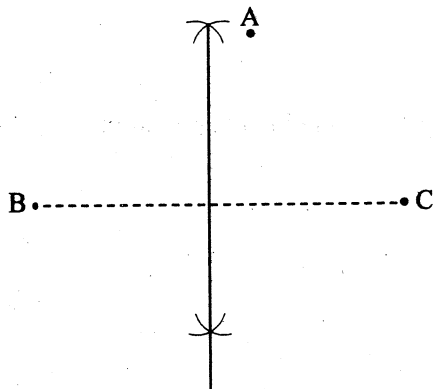
Part B

Answer all the questions on this paper itself.

01. $\frac{5}{8}$ of the money collected from students in a certain class for an educational trip were spent for the bus and $\frac{2}{3}$ of the remaining were spent for food.

  (i) What fraction of the amount were remaining after spending for bus?

  (ii) What fraction of the whole amount were spent for food?

  (iii) After the above expenses, remaining amount were spent to buy tickets at the viewing points. What fraction of the whole amount were spent to buy tickets?

  (iv) If Rs. 2 000 were spent to buy tickets and the number of students who went the trip were 40, what is the amount collected from one student?

02. Length of a rectangular shaped land, which was chosen to perform a musical show, is twice of its breadth. Along one of its width side, a semi circular shaped stage is arranged as shown in the figure.

  (i) If the breadth of the land is 28m, what is the radius of the semi circular stage?

  (ii) How many times bigger is the length of the land than the radius of the stage?

  (iii) Calculate the perimeter of the stage.

  28 m

  (iv) Find how large is the area of the rectangular shaped land compared to the area of the stage.
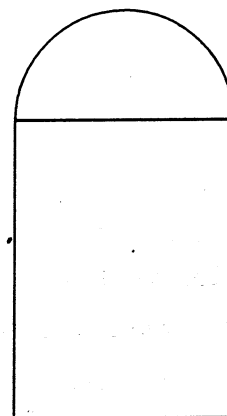
03. (a) A person who owns a retail shop, loaned Rs. 20 000 at an annual simple interest rate of 12% from a financial institution.

    (i) If Rs. 100 is loaned from the above financial institution, how much should be paid as annual interest?

    (ii) For the loaned amount, how much should he pay as the annual interest?

   **(iii)** What is the total amount that he should pay in order to settle the loan after three years?

(b) Shop owner pays Rs. 400 as rates per quarter and the relevant municipal council charges annual rates of 2%.

    (i) What is the annual rates that the shop owner pays?

    (ii) Calculate the annual assessed value of the shop.

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04. An incomplete table of values and a pie chart which is drawn to illustrate the crowd who came to see a school sports meet is given below.

Crowd	Number
Invites	....
Parents	110
Old pupils	a
Other	....
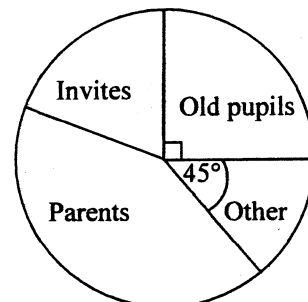
(i) If the total number of people who went to see the sports meet is 240, find the value of a.

(ii) Calculate the angle at the center of the sector which represents parents.

(iii) Fill in the blanks in the table

(iv) Calculate the angle at the center of the sector which represents invites.

(v) If 60% of the parents who came were mothers, find the number of fathers who participated.

05. (*a*) It is needed to select two girls for two dance items for a school concert. They should be selected from a group of three grade 10 girls and two grade 11 girls. It is possible to select one girl for both dance items. (Grade 10 girls are represented by T and the grade 11 girls are represented by E)

(i) Represent all the possible ways of selecting girls in the given grid.

(ii) Find the probability of selecting one girl for both items.

(iii) Find the probability of selecting two girls from different grades for the dance items.

(b) Sandamini is a grade 10 student who is in the above group. Probability of Sandamini getting selected for the first dance item is $\frac{1}{5}$.

(i) Write the relevant probabilities in the given tree diagram which is drawn to represent Sandamini getting selected or not getting selected for the dance item.

Getting selected

Not getting selected
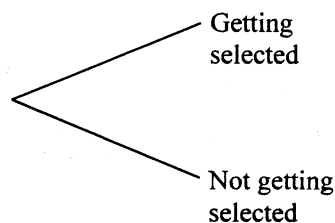
(ii) Probability that Sandamini getting selected for the second dance item is also $\frac{1}{5}$, extend the tree diagram to represent Sandamini getting selected or not getting selected for the second dance item.

(iii) Find the probability that Sandamini getting selected for at least one dance item.