බස්නාහිර පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
மேல் மாகாணக் கல்வித் திணைக்களம்
Department of Education – Western Province

පළමු වාර ඇගයීම
முதலாம் தவணைமதிப்பீடு - 2019
First Term Evaluation

ශ්‍රේණිය தரம் **Grade**	**10**	විෂයය பாடம் **Subject**	**Mathematics**		පත්‍රය வினாத்தாள் **Paper**	**I**		කාලය காலம் **Time**	**Two Hours**

Name :-…………………………………….………………

Index Number :- ………………………………

………………………………
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

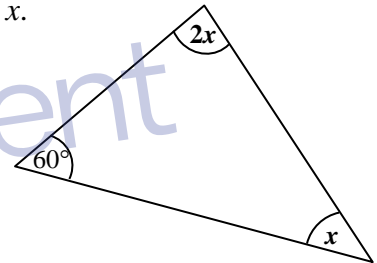| Part	Question number	Marks
A	**1 – 25**	
B	**1**	
	2	
	3	
	4	
	5	
Total		

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

1. 4 men can complete a certain work within 5 days. How many days will it take for 10 men to complete a work which is twice the magnitude of the above mentioned work?

2. Find the factors. $x^2 - x - 6$

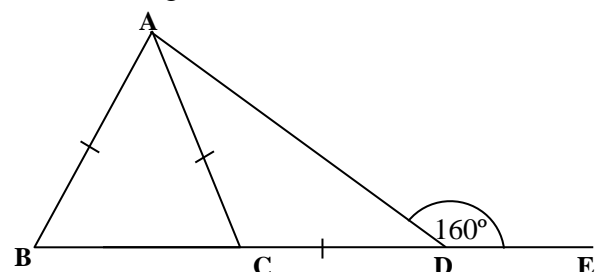3. According to the information given in the figure, find the value of x.

4. The perimeter of the given sector is 39cm and the radius of it is 14cm. Find the arc length of it.
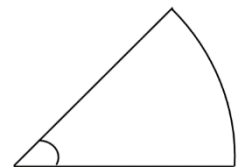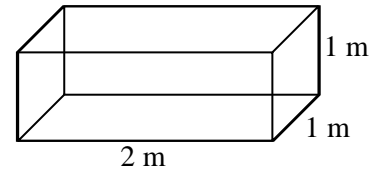

5. Simplify. $\dfrac{1}{x} - \dfrac{3}{4x}$

6. According to the information given in the figure find the magnitude of $B\hat{A}D$.'
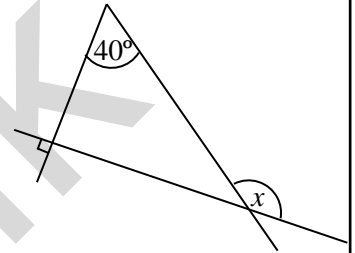
7. Underline the value of $\sqrt{42}$ for the first approximation.

   (i) 6.3   (ii) 6.4   (iii) 6.5   (iv) 6.6

8. Find the capacity of the given cuboid shaped tank in liters. ($1m^3 = 1000l$)

1 m
1 m
2 m

9. According to the information given in the figure, find the value of x

40°

x

10. Solve. $\dfrac{x}{2} - 1 = 5$

11. $\dfrac{7}{8}$ of a tank was filled with water. If $\dfrac{5}{7}$ of it was used, what fraction of the whole quantity of water is used?

12. If the following statements are true put ✓ and if the statements are false put ✘.

   Sum of the interior angles of a triangle is 180^0.

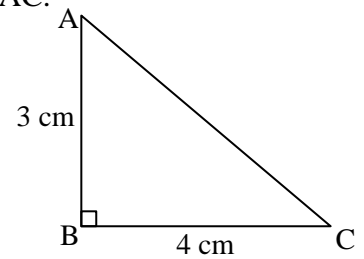   In a triangle, when two sides are equal, the angles opposite to the equal sides are equal.

   A pair of right angular triangles can be congruent only under the case R. H. S

13. Find the probability of getting a card with an odd number, from a pack of five identical cards written 1 to 5 on them.
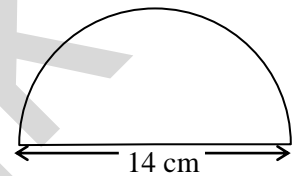
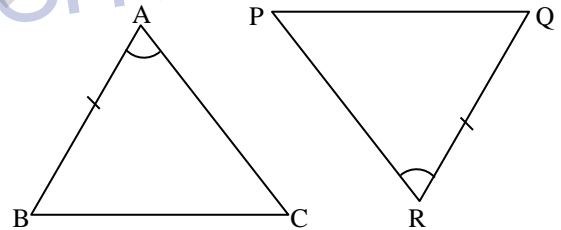14. According to the information given in the figure, find the length of AC.

A

3 cm

B 4 cm C

15. Find the 10th term of the number pattern $T_n = 3n + 2$.

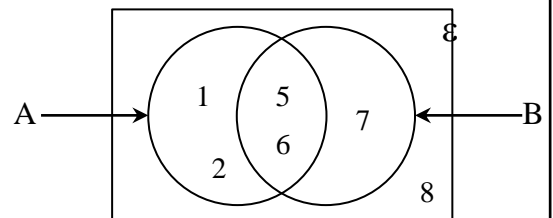16. Figure shows a semi circle with the diameter 14cm.

Find the area of it. ($\pi = \frac{22}{7}$).

14 cm

17. Write the other pair of elements that should be equal to become the triangles ABC and PQR, under S.A.S case.

A P Q

B C R

18. According to the information in the Venn diagram write the set $A^{/}$ by listing its elements.
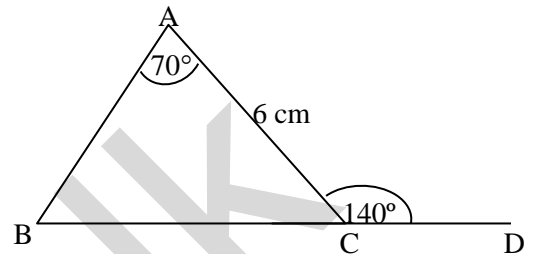
A ⟶ ε

1 5

7 ⟵ B

6

2

8

19. A vehicle travels at a speed of 60 kilometers per hour. How many hours will it take to travel 180km?

20. Write the gradient of the straight line which passes through the points (0,6) and (1,4).

21. Find the least common multiple of the given algebraic terms.

$4a^2b$, $6\,ab^2$

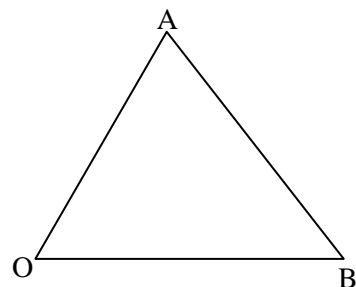22. According to the information given in the figure,

find the BC length.

23. Write the smallest positive integer which satisfy the inequality $x - 3 \geq 2$.

24. Find the median of the given distribution.

2, 4, 6, 8, 9, 11, 15, 17, 20, 21, 25

25. Using the knowledge of loci, mark the point X on AB, which is equidistant to OA and OB.

PART B
Answer all the questions on this paper itself.

01. A tailor used $\frac{2}{5}$ of a fabric roll to sew table cloths and $\frac{3}{4}$ of the remaining were used to sew pillow covers.

   i. What fraction of the whole fabric roll were remained after sewing the table clothes?

   ii. What fraction of the whole fabric roll were used for pillow covers?

   iii. After sewing the table clothes and the pillow covers, the length of the remaining fabric is 9m. Find the total length of the whole fabric roll.

   iv. If 3m of cloth is needed to sew a table cloth and ½m of cloth is needed to sew a pillow cover, find the number of table cloths and the number of pillow covers made using the above mentioned fabric roll.

02. Given combined figure is made using a rectangular shaped portion and a sector.
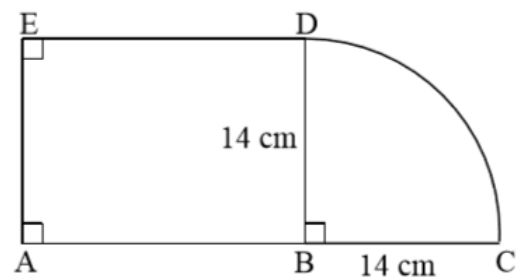
   i. Find the area of the BDC sector.

   ii. If the area of ABDE portion is twice the area of the BCD sector, find the AB length.

   iii. Find the DC arc length.

   iv. Find the perimeter of the whole figure.

   v. A right angle triangular portion which is equal to the area of the sector, is needed to fix along the produced BA and taking AE as a side. Find the lengths of the two sides of the triangle, in which the right angle is included and sketch it in the above given figure.

03. Food sufficient for 20 hens for 30 days are stored in a farm.

    i.   For how many days does this food be sufficient for one hen?

    ii.   After 18 days another 10 hens were taken to the farm. Now for how many days does this food be sufficient for all the hens in the farm?

    iii.   After taking 10 hens to the farm, 4 days later 6 hens has passed away. Now for how many days does this food be sufficient for the hens in the farm?

    iv.   Finally for how many days does the food stored in the farm be sufficient?

04. The given pie chart represents the information gathered from an agricultural organization, regarding 300 farmers.

    i.   How many farmers grow rubber?

    ii.   If the number of farmers who grow coconut is four times the number of farmers who grow cinnamon, how many farmers grow coconut?

    iii.   What is the angle of the sector which represents the farmers who grow tea?

    iv.   If $\frac{1}{3}$ of the farmers who grow rubber decided to remove rubber and cultivate cinnamon, what is the angle of the sector which represents the farmers who grow cinnamon now?
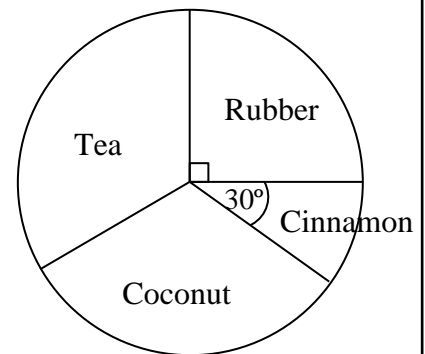
05. If $\varepsilon = \{ 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 \}$

     A = { 2, 4, 6, 7 }

     B = { 1, 4, 7, 9, 10 }

    write the following sets by listing its elements.

    i. $A \cap B$

    ii. $A \cup B$

    iii. $A^{/}$

    iv. $B^{/}$

    v.   Represent the above information in a Venn diagram.