



## Minuwangoda Education Zone

### Second Term Evaluation - 2025

Grade - 10

### Mathematics I

Name: .....

Time: 2 hours

#### Part A

Answer all the questions.

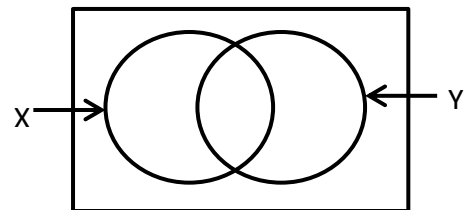
01) Find the value  $2 - 0.076$

02) Find the least common multiple of  $4a^2c, 3ac$

03) Simplify  $\frac{3x-1}{5} + \frac{2x+6}{5}$

04) A house of assessed value of Rs.120 000 is charged annual rate of 4%. Calculate the rates that have to be paid for a quarter.

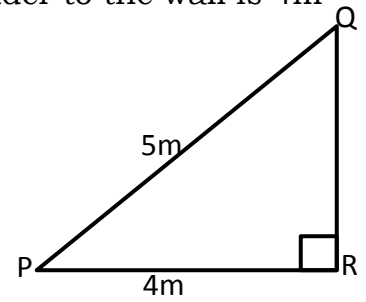
05) Solve  $(X \cap Y)'$ .



06) Solve  $\frac{4x}{5} - 1 = 3$ .

07) Find the probability of getting a prime number when a dice is tossed numbered from 1 to 6.

- 08) The figure shows the manner of a ladder PQ is fitted to a vertical wall. The length of ladder is 5m and the horizontal length from bottom of the ladder to the wall is 4m. Find the height RQ.



- 09) Write as products of two factors  $4a^2 - 25$

- 10) After given a discount the selling price of a certain book is Rs.1440. If the marked price of the book is Rs.1600, Find the discount percentage.

- 11) Make the subject as  $r$ ,  $V = \frac{1}{3}\pi r^2 h$

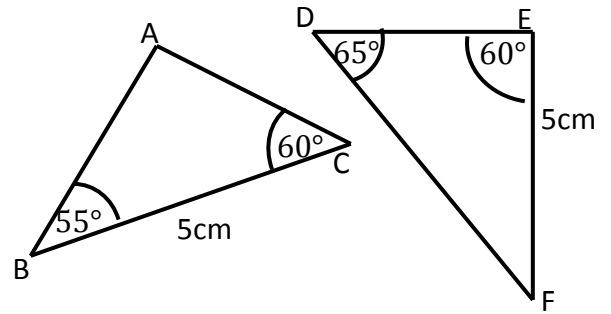
- 12) An exterior angle of a regular polygon is  $30^\circ$ . Find number of side of its

- 13) Solve  $x^2 - 5x = 0$

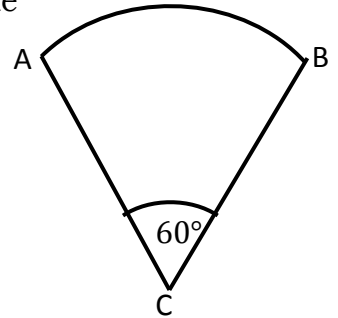
- 14) Find the equation of the straight line passes through the point (0, 2) and parallel to the straight line  $y = 3x - 1$

- 15) Find the value of  $96^2$  using the difference of two squares.

16) Are the triangles ABC and DEF congruent?  
If then, write the case of congruence briefly



17) If the arc length AB is 15cm, Find the circumference of the circle



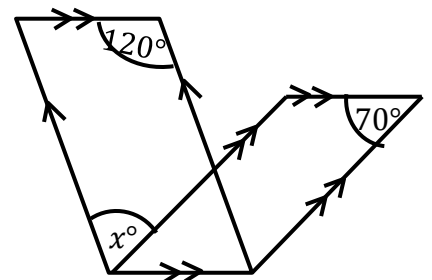
18) What are the perfect squares that are located either of  $\sqrt{19}$

19) Simplify  $2 - \frac{2}{5}$  of  $1\frac{2}{3}$

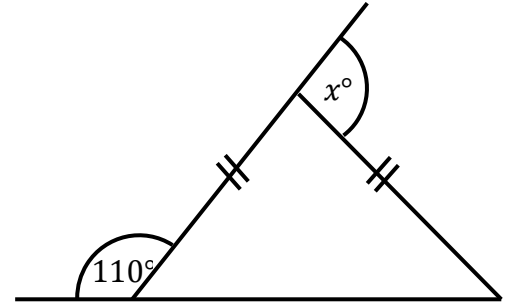
20)  $n(A) = 18$ ,  $n(B) = 23$  and  $n(A \cup B) = 41$ . Find  $n(A \cap B)$  Which types of sets A and B are

21) Find the value  $3^{-3}$

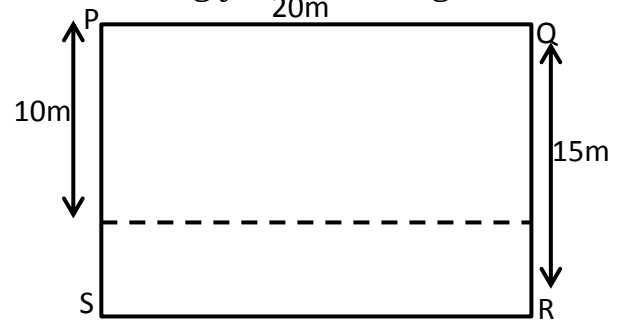
22) Find the value of  $x$ .



23) Find the magnitudes of  $x$ .

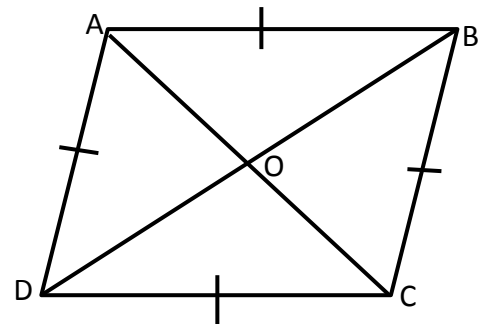


24) The mango tree X is located equidistance from PS and SK and 10m away from PQ in the rectangular garden PQRS. Mark the position of X using your knowledge on loci.



25)  $ABCD$  is a Rhombus. If below statements are correct put ( $\checkmark$ ) if not (X)

- i.  $AC = BD$  fõ. ( )
- ii.  $AOB = 90^\circ$  ls. ( )
- iii.  $\hat{ABD} = \hat{DBC}$  fõ. ( )



## PART B

01) 30% of custom duty is paid for a imported bicycle worth Rs.40 000. A person who had imported 20 such bicycles is paid Rs.12 000 for transportation

- i. Find the amount that has to be paid as duty for a bicycle.
- ii. Calculate total amount for all the bicycles with transportation cost
- iii. Calculate the amount to be paid for a bicycle with transportation cost

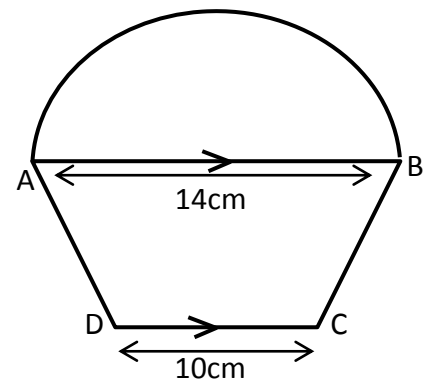
- iv. Find the selling price of a bicycle, If he hopes to get 20% of profit for a bicycle

02) Half of a water tank is filled with water  $\frac{1}{3}$  of filled water is used at first day. Then  $\frac{1}{4}$  of remain is used at second day.

- i. What is the fraction of water that is used at first day
- ii. What is the fraction of remain water after using at first day
- iii. If the amount of remain water after using in 2 days is 150l, Find the total capacity of the tank.

03)  $ABCD$  is a trapezium shaped figure and a semi circular shape with diameter as  $AB$  is shown below.

- i. Find the radius of the semi circular part.



- ii. Find the arc length.

- iii.  $AD = BC = DC = 10\text{cm}$ . If small holes are drilled around whole figure at the distance 2cm by 2cm, How many wholes are there?

- iv. If area of trapezium equals to the area of semi circular part, Find the perpendicular distance between two parallel sides of trapezium (Keep the answer as a mixed number)

04) 12 days are sufficient for 10 men to dig a well. But after worked at 4 days 5 men are getting sick. If remain men worked several days they could complete half of the task.

- i. Find number of days worked by remain people.
- ii. If the daily wage of a person is Rs.2200, Find total amount to be paid for completed task.

05) Below pie chart expresses the information on O/L examination of a certain school.

- i. Find the angle at the centre of the sector which is denoted number of students with A passes.
- ii. If the number of students who have failed the exam is 6, find number of students who have achieved B passes
- iii. Find the total number of students who are faced for the exam
- iv. If there are 2 students who had achieve "S" passes change to "C" passes due to re-correction, Find the angle at the centre corresponding to "C" passes.

