



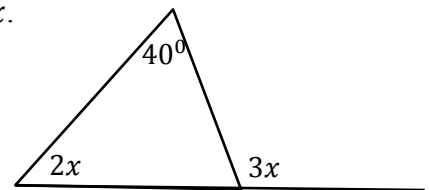
Part A

Answer all questions on this paper itself.

1. It should be paid 60% of the value as rates when a television is imported. How much should be paid as rates when a television worth Rs.75,000 is imported?

2. Find factors of  $-3x + 2 + x^2$

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

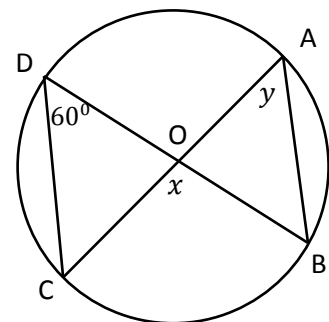


4. Select the first approximation of  $\sqrt{7}$  from the following.

- a. 49.0    b. 2.6    c. 2.7

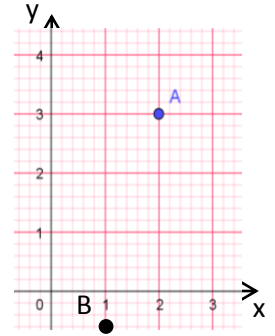
5. A tank with the capacity of 1800l is completely filled with water. When its tap is open the water flows at the rate of 50 litres per second. Find the time taken to empty the tank?

6. If  $\widehat{BDC} = 60^\circ$  in the circle with centre O, find the values of  $x$  and  $y$ .



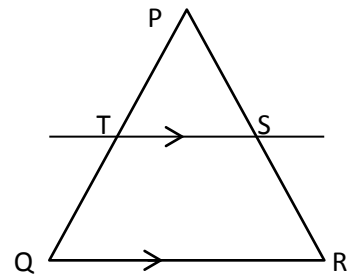
7. The area of the curved surface of a right circular cone is  $264\text{cm}^2$  and the slant height is 12cm. Find the radius of its base.

8. Write down the gradient of the straight line which passes through the points A and B in the Cartesian plane.



9. Represent all the solutions of the inequality  $1 - 2x > 5$  in a number line.

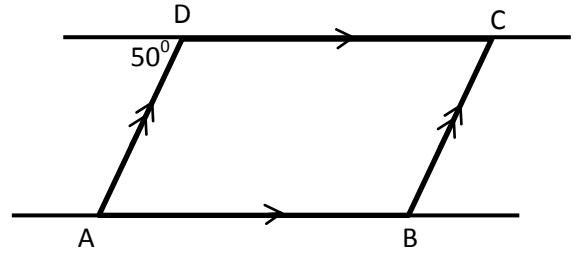
10. PR is 8cm and the mid point of the side PQ is T of the equilateral triangle PQR. If  $QR \parallel TS$  find the perimeter of the trapezium QRST



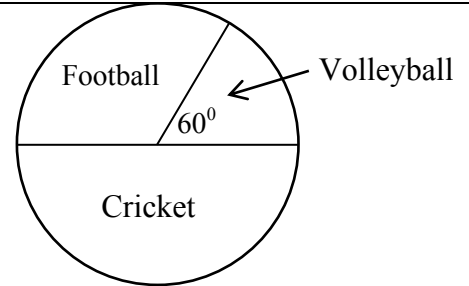
11. Find the least common multiple of the following algebraic term.  
 $a^2, 4a^2b, 3b$

12. Find the number of days that 12 men would take to complete a certain work which can be completed by 10 men within 6 days.

13. ABCD is a parallelogram. Find the value of  $\hat{A}BC$ .

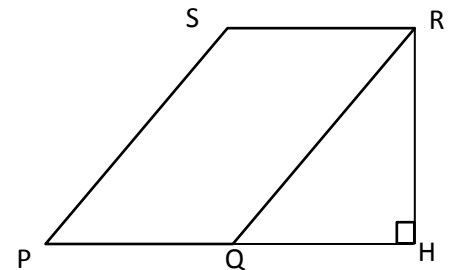


14. The pie chart represents a group of students who like football, cricket and volleyball. If 12 students like volleyball find the total number of students in the group.



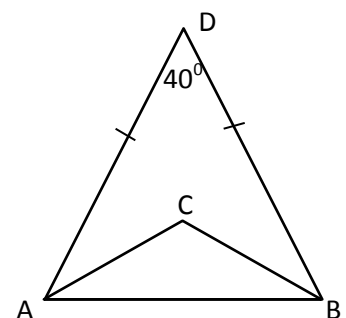
15. If  $0.001 = 10^{-3}$  find the value of  $\lg 0.001$ .

16. PQRS is a parallelogram with  $80\text{cm}^2$  in area. If  $PQ = QH$ , Find the area of the triangle QHR.

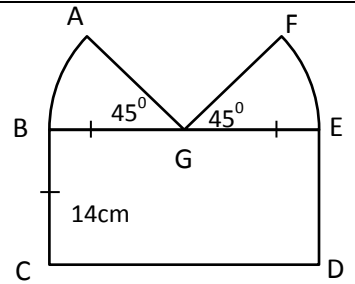


17. Solve.  $9x - x^2 = 0$

18. The bisectors of  $\hat{D}AB$  and  $\hat{D}BA$  meet each other at C. According to the information given in the figure find the value of  $\hat{A}CB$



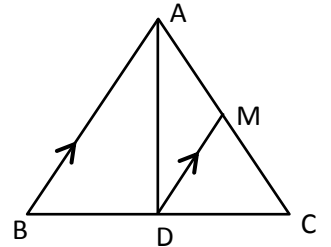
19. The length of the arc AB is 11cm. Find the perimeter of the figure A B C D E F G.



20. The table shows the number of students who passed the exam or not. Find the probability of a randomly selected student is being a boy who has not got through the exam .

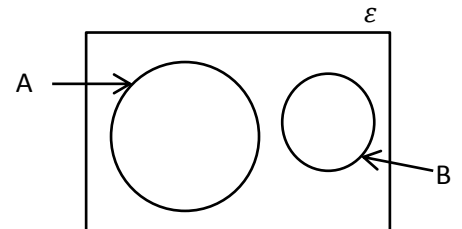
	Passed	Not Passed
Male	9	13
Female	16	7

21. The mid point of the side BC of the triangle ABC is D. DM is parallel to AB and DM=5cm. Find the length of AB.

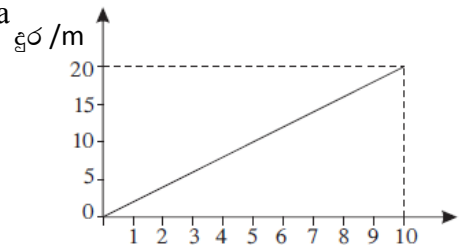


22. Simplify.  $\frac{3}{2x} + \frac{3}{x}$

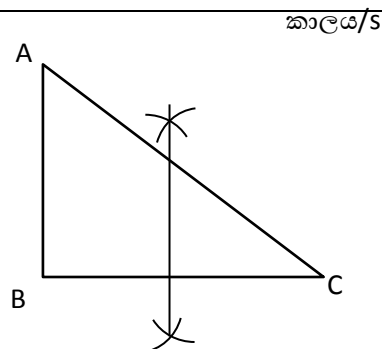
23. Shade the region  $(A \cup B)'$  in the Venn diagram.



24. The motion of a motor car within 10 seconds is represented in a distance - time graph. Find the speed of the motor car



25. Mark the point in the triangle ABC such that it is equidistant to the points B and C and 3cm away from the side AC.

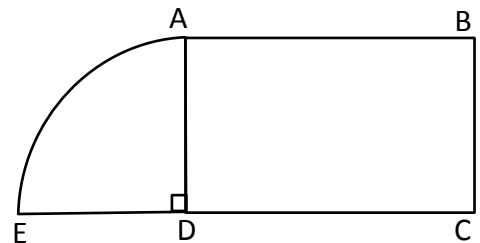


### Part B

Answer all questions in the paper itself.

1.  $\frac{1}{3}$  of a tank is already filled with water. If another 700l of water is added, it would be filled up to  $\frac{3}{4}$  of its capacity.
- i). What fraction of the total capacity is the added amount of water?
- ii). Now  $\frac{2}{3}$  of the volume of water in the tank is used for a cultivation. Express that amount as a fraction of the total capacity of the tank.
- iii). The amount of water (in the question number 1 - ii above) is equally divided and used for four plots. Find in litres the amount of water used for one such plot.
- iv). Express the remaining amount of water (in the tank) in litres

2. The figure shows a portion of a land with a sector of radius 14m and the angle of  $90^\circ$  at the centre of it. The length of the rectangular portion is 20m. (Consider  $\pi = \frac{22}{7}$ )



- i). Find the arc length AE.
- ii). Find the number of posts needed to put up a fence around the whole land with a gap between two posts is two metres.
- iii). Find the area of the whole land.
- iv). It is needed to separate a right angled triangular portion of land BCR which is equal to the above sector in area. mark the triangle BCR with relevant measurements in the diagram above.

03. A divisional administrative council charges rates AT 6% annually. The annual assessed value of a certain house is Rs.120 000. The owner has rented it for Rs.15 000 monthly.

( a ) i. How much is the annual rates of the house.

ii. How much is one quarter if the rates would be paid quarterly.

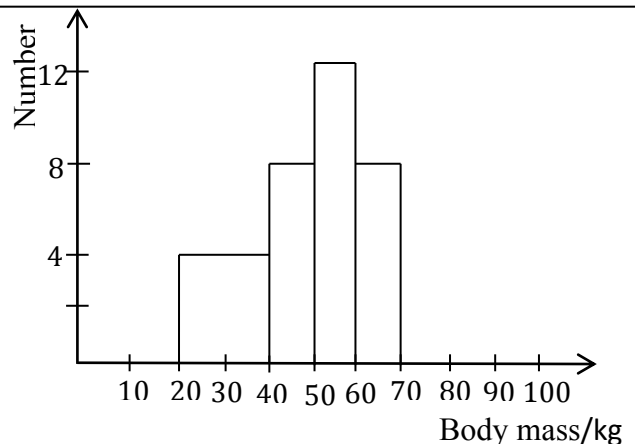
iii. It is needed Rs.38 000 annually for the maintenance of the house. Find the annual profit gained by the house owner

(b) The percentage customs duty of an imported television is 12% of its value. After paying customs duty the value of the television is Rs.56 000.

i. Find the value of the television before paying customs duty.

ii. Find the amount of money paid as customs duty.

4. An incomplete histogram drawn on the body masses of a certain group of people who gathered at a clinic is given below .



i. According to the histogram drawn here what is the modal class

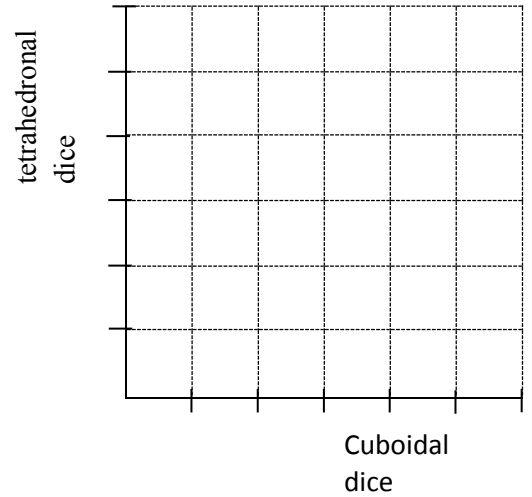
ii. Find the number of people who are below 50kg of body mass ?

iii. The number of people who are between 70kg - 90kg is 12 depict that information in the histogram above.

iv. Complete the histogram and draw the frequency polygon accordingly.

v. Find the total number of people who attended the clinic

5. a. A random experiment is done using a cuboidal dice numbered its faces from 1-6 and a regular tetrahedral dice numbered its faces from 1-4. There both dice are released simultaneously on a table and the number of the face of each dice that touches the surface of the table is recorded



- i. Represent the sample space of the experiment in the grid.
- ii. Show the event of obtaining even numbers on both the faces and find the probability of that event.
- ii. Find the probability of observing an odd number at least on one die.

b. Another experiment is done using above two dice. The cuboidal dice is released at first and secondly the tetrahedral dice. Again the number (whether it is even or odd) of the face that touches the surface is observed.

An incomplete tree diagram drawn on the above information is given below. Complete it..

