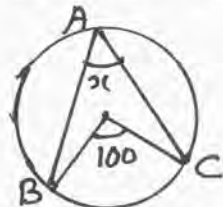


Questions for SSLC 2017

1. Find the distance between the points  $A(-1, 2)$  and  $B(3, 4)$   
(ബിന്ദുക്കൾ തമ്മിൽ ചെയ്ത നീളം കാണുക)
2. Check whether  $(x-1)$  is a factor of  $P(x) = x^2 - 1 + 1$  or not.  
(‘factor’ എന്ന് കാണാൻ  $P(x) = 0$  എന്നും  $P(1) = 1^2 - 1 + 1$  എന്ന് എഴുതാനും കഴിയണം)
3. Find the second and fourth terms of the Arithmetic sequence  $11, -, 19, -, \dots$   
(‘Arithmetic sequence’ എന്ന് കാണാൻ  $x_n = f + (n-1)d$  എന്നും  $cd = \text{second term} - \text{first term}$  എന്നും എഴുതാനും കഴിയും)
4. Find the median of  $2, 8, 0, 1, 4, 6, 7, 3$
5. Find the median of  $10, 9, 3, 4, 2, 6, 1$
6. There are 18 balls in a box - 5 white 3 black and 10 blue. Find the probability of getting  
(1) a white  
(2) a black  
(3) a blue when a ball is selected from the box.  
( $P(A) = \frac{\text{no. of favourable cases}}{\text{Total no. of possible cases}}$  എന്നതിലും എഴുതണം)

7. In the figure find  $x$



(Central angle =  $2 \times$  angle in the circle എന്നതിലും എഴുതണം)

8. Find the median

10-20	3
20-30	4
30-40	2
40-50	10
50-60	2
60-70	7
70-80	2
80-90	5
90-100	5

9. Draw  $\triangle ABC$  with  $AB = 10\text{cm}$ ,  $\angle A = 50^\circ$  and  $\angle B = 70^\circ$ . Draw the incircle of  $\triangle ABC$  and write the measure of its radius.

10. The sum of a number and its reciprocal is  $\frac{25}{12}$ . What is the number? Prove that the sum of a positive number and its reciprocal is always greater than or equal to 2.

(Let the number =  $x$  എന്നെങ്കിലും ചെറുതാക്കം. കൂടാതെ  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$ )

എന്ന് ചെറുതാക്കം ഉള്ള പ്രശ്നം നമുക്കും)

11. The base radius of a wooden cone is 10cm and its height is 15cm. What is its volume?

12. Draw X and Y axes and mark the points A(5, 8) and B(3, 2). Join AB. Is (1, 3) a point on this line?

13. Find the midpoints of the line joining A(1, 2) and B(3, 6). Also find its slope.



14. Express  $x^2 - x - 1$  as the product of two first degree polynomials.

(  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$  എന്ന കീഴെ രേഖകൾ കഴിയും)

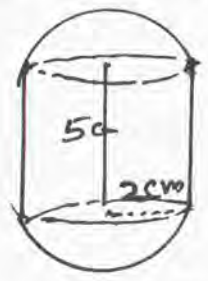
15. Solve  $x^2 - 8x + 16 = 0$

( a, b, c എന്നിവ കണ്ടെത്തി  $x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$

എന്നതിൽ substitute ചെയ്യാനുള്ള കഴിവ്)

16. Draw a rectangle of length 7cm and breadth 5cm. Construct a square of equal area to the rectangle.

17. Find the Volume of the following tank.



(Volume of tank = Volume of cylinder + Volume of sphere എന്നും അല്ലെങ്കിൽ

Volume of 1 + Volume of 2 +

Volume of 3 എന്നും കീഴെ രേഖകൾ)

$V = \pi r^2 h + \frac{2}{3} \pi r^3 + \frac{2}{3} \pi r^3$  എന്ന് കുടി രേഖകളിലായാൽ നന്നായി (അദ്ധ്യക്ഷൻ്റെ അനുമതി)

18. Hari standing on the top of a building, sees the top of a tower at an angle of elevation of  $50^\circ$  and the foot of the tower at an angle of depression of  $20^\circ$ . Height of Hari is 1.6m and height of the building on which he is standing is 9.2m

How far is the tower from the building?

(Also recall Sin, Cos, tan definition,  $30^\circ:60^\circ:90^\circ$ ,  $45^\circ:45^\circ:90^\circ$  നിർണ്ണയം ഉപയോഗിച്ച് ഉത്തരം)

19. The points A to F are given below.

A(2,4) B(2,6) C(5,4) D(5,9) E(8,4)

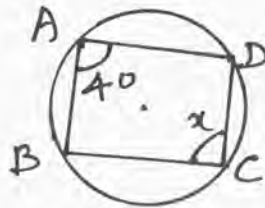
F(8,12). Find the lengths of AB, CD and EF. Prove that these lengths are in arithmetic sequence.

20. Write the next two lines in the pattern.

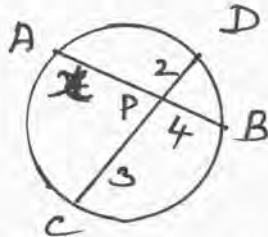
```

      1
     2 3
    4 5 6
   7 8 9 10
  ---
  ---
  
```

21. Find  $x$ .



22. Find the length of AP



23. Find  $b^2 - 4ac$  for the second degree equation  $2x^2 - 3x + 4 = 0$

24. Prove that  $(x-1)$  is a factor of  $x^2 - 2x + 1$ .

25. What is the measurement of an angle in a semi circle?