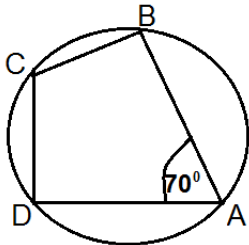


SUMMATIVE ASSESSMENT – II (2016-17) SUBJECT, MATHEMATICS

SECTION A Question numbers 5 to 10 carry one mark each

1. Write on solution of $x + y = 5$
2. Find whether $(1, 2)$ is a solution of linear equation $x - 2y = 0$
3. A circle passes through A, B, C and D as shown in the figure. If $\angle BAD = 70^\circ$, find x.



4. Two cubes of side 1 cm each are joined end to end, Find the volume of the cuboid so formed?

SECTION B Question numbers 5 to 10 carry two marks each

5. Prove that median of a triangle divides it into two triangles of equal areas.
6. Find the length of the chord which is at a distance of 9 cm from the centre of circle of radius 15 cm
7. Construct 45° using compass.
8. A cone is 8.4 cm high and the radius of its base is 2.1 cm. It is melted and recasted into a sphere. Find the radius of sphere.
9. A survey of 200 students was conducted to check the opinion of students about the topic Statistics. It was found that 135 students did not like Statistics. Find the probability that the student chosen at random like Statistics.
10. A die is rolled 1000 times and following outcomes are recorded :

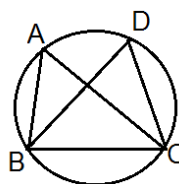
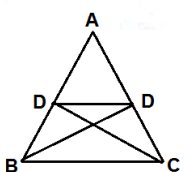
Outcome	1	2	3	4	5	6
Frequency	179	150	157	149	175	190

Find the probability of getting:

- (i) Number 5 (ii) Multiple of 3

SECTION - C Question numbers 11 to 18 carry three marks each.

11. Give the geometric interpretation of $4x = -2$ as an equation in : (i) one variable (ii) two variables
12. Total runs scored in a one-day match by Dhoni and Raina are 180. Represent this situation as a linear equation in two variables. Also draw its graph.
13. In the given figure, $\text{ar}(\triangle AEB) = \text{ar}(\triangle ADC)$. Prove that $\text{ar}(\triangle DEB) = \text{ar}(\triangle DEC)$,
14. In the given if $\angle ABC = 69^\circ$ and $\angle ACB = 31^\circ$. Find $\angle BDC$.



15. Draw a line segment AB of measure 5.5 cm, Construct its perpendicular bisector.

16. 60 circular plates of each radius 7 cm and thickness 1.3 cm, are placed one above the another to form a solid circular cylinder. Find the volume of the cylinder so formed.

17. The scores (out of 100) obtained by 33 students in a Mathematics test are as follows:

69, 48, 84, 58, 48, 73, 83, 48, 66, 58, 84, 66, 64, 71, 64, 66, 69, 66, 83, 66, 69, 71, 81, 71, 73, 69, 66, 66, 64, 58, 64, 69, 69

Represent this data in the form of frequency table?

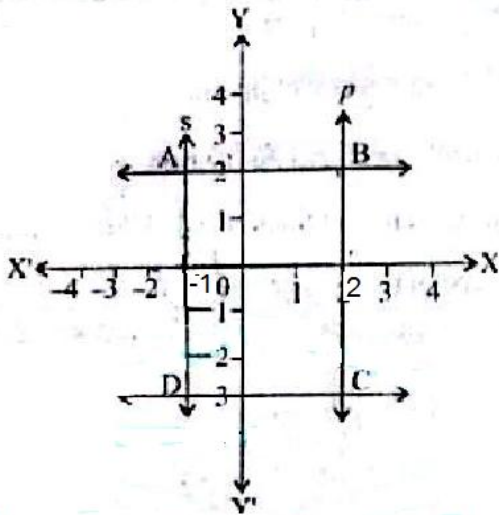
18. The following observations have been arranged in the ascending order :

29, 32, 48, 50, $x - 2$, x , 72, 78, 84, 95

If the median the data is 65, find the value of x ,

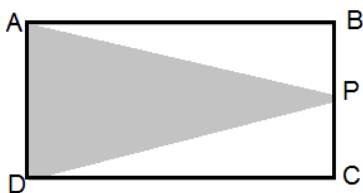
SECTION - D Question numbers 19 to 28 carry four marks each.

19. Write the e coordinates of A., B, C, D. Also find length and breadth of rectangle ABCD.



20. Draw the graph of the following equations on the same graph sheet : $x - y = 0$ and $x + y = 4$

21. If area of parallelogram ABCD is 80 cm^2 . Find area of $\triangle APD$, Also state the theorem used to prove it.



22. Prove that the angle subtended by an arc of the circle at the centre is double the angle subtended by it at any point on the remaining part of the circle.

23. 3. Construct $\triangle KLM$ in which $KL + LM + MK = 15 \text{ cm}$ and $\angle L = 90^\circ$ and $\angle M = 30^\circ$

24. In a Govt. school, a teacher organised a competition in which students were asked to use cardboard for making cylinder pen stand of radius 4 cm and height 25 cm.

(i) To supply the cardboard to the 35 competitors (students), find the area of cardboard required.

(ii) These pen-stands will be sold and amount so collected is donated to PM Relief Fund. What value depicted in this context?

25. A room is 30 m long, 24 m broad and 1g m high. Find: (i) its total surface area (ii) its volume
26. A mansion has 12 cylindrical pillars each having radius 50 cm and height 3.5 m. Find the cost of painting the curved surface of the pillars at Rs. 20 per square meter.
27. Two dice are thrown simultaneously 500times. Each time , the sum of number appearing on their tops is noted and recorded in the following table:

Sum of number	2	3	4	5	6	7	8	9	10	11	12	Total
Frequency	14	30	42	55	72	75	70	53	46	28	15	500

Find the probability of getting a sum (i) 3 (ii) 10(iii) less than or equal to 5

28. Draw frequency polygon

Speed(km/hr)	30-40	40-50	50-60	60-70	70-80
No. of buses	4	10	16	8	6

SECTION 'E' (Open Text) Theme: Solving Mystery of messed up fields

29. If angles of Jeevan's field are in the raga 3 :3 : 2 :4, find all the angle.; and determine the type of quadrilateral
30. According to open text. David's field is a rectangle. Prove that the diagonal of rectangle divides it into two congruent triangles.
31. Listening to Dorjee's statement, Roshni concluded that her farm is a square or rhombus ,show that diagonal of a rhombus bisects both the opposite angles