

ಕರ್ನಾಟಕ ಶಾಲಾ ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯನಿರ್ಣಯ ಮಂಡಲ

ಕೆಎಸ್‌ಕೆಎವಿಸಿ, ಮಲ್ಲೇಶ್ವರಂ, ಬೆಂಗಳೂರು-560003.

KARNATAKA SCHOOL EXAMINATION AND ASSESSMENT BOARD

KSQAAC, Malleshwaram, Bengaluru-560003.

ಮೌಲ್ಯಾಂಕನ - ಮಾರ್ಚ್ 2024 - ಮಾದರಿ ಪ್ರಶೋತ್ತರ ಪತ್ರಿಕೆ

Assessment - March 2024 Model Paper

Class : 9

Subject : Mathematics

Marks : 80

Medium : English

Time : 3 Hours

Information to be filled by the Student

Name of the Student : \_\_\_\_\_

Student SATS No :

Signature  
of the Student : \_\_\_\_\_

Information to be filled by the Room Invigilator

School DISE Code :

School Name : \_\_\_\_\_

Cluster : \_\_\_\_\_ Block : \_\_\_\_\_ District : \_\_\_\_\_

School Type : Govt.  Aided  Un-aided

(Put "✓" mark for applicable information)

Signature of the Room Invigilator : \_\_\_\_\_

Information to be filled by the Evaluator at the time of evaluation

Question Number	Obtained marks	Question Number	Obtained marks	Question Number	Obtained marks
1		14		27	
2		15		28	
3		16		29	
4		17		30	
5		18		31	
6		19		32	
7		20		33	
8		21		34	
9		22		35	
10		23		36	
11		24		37	
12		25		38	
13		26			
Total marks		Total marks		Total marks	
				Grand Total	

Total marks obtained (in words) : \_\_\_\_\_

Signature of the Evaluator : \_\_\_\_\_

- I. For each of the following questions / incomplete statements four alternates are given. Choose the most appropriate among them and write it along with the alphabet.

8 x 1 = 8

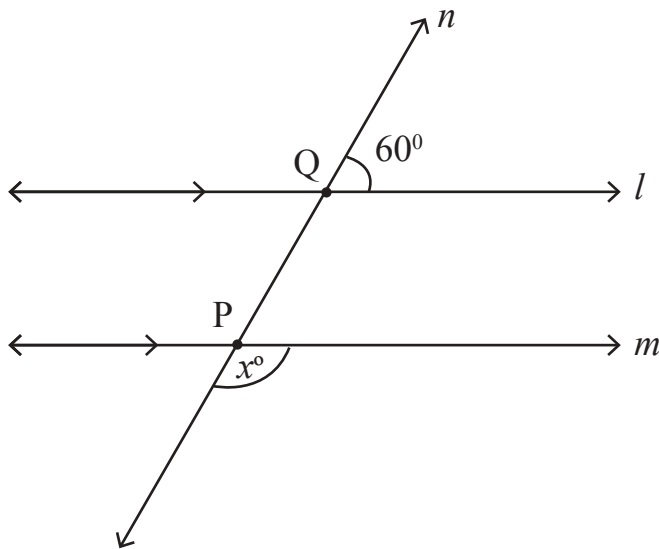
1. The value of  $4^{\frac{3}{2}}$  is

- A. 8                      B. 16                      C. 32                      D. 64

Answer:  \_\_\_\_\_

2. The measure 'x' in the given figure is

- A.  $60^{\circ}$                       B.  $90^{\circ}$                       C.  $120^{\circ}$                       D.  $180^{\circ}$



Answer:  \_\_\_\_\_

3. In a polynomial  $p(x)=3x^2-2$ , the value of  $p(1)$  is

- A. 2                      B. 1                      C. 5                      D. 0

Answer:  \_\_\_\_\_

4. Among these one of the solution for the equation  $x + 2y = 6$  is

- A. (1,3)                      B. (3,1)                      C. (4,2)                      D. (2,2)

Answer:  \_\_\_\_\_

5. If a point 'M' lies on x-axis then its co-ordinates are

- A. (0,x)                      B. (0,-x)                      C. (x,0)                      D. (x,-x)

Answer:  \_\_\_\_\_

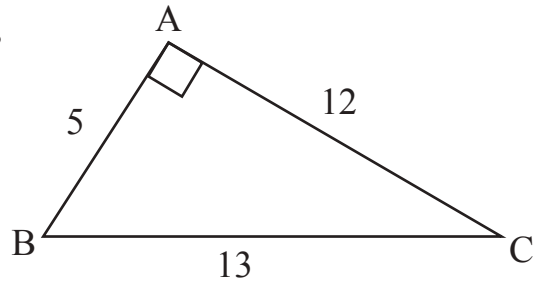
6. If the probability of winning a game is 0.86, then probability of not winning the game is

- A. 0.14                      B. 0.76                      C. 0.85                      D. 0.41

Answer:  \_\_\_\_\_

7. The area of triangle ABC in the given figure is

- A.  $32.5 \text{ cm}^2$                       B.  $15 \text{ cm}^2$   
C.  $78 \text{ cm}^2$                       D.  $30 \text{ cm}^2$



Answer:  \_\_\_\_\_

8. Observe the given figure.



The correct relationship among these is

- A.  $AP > PQ + QR + RB$                       B.  $AP + PQ + QR < AB$   
C.  $AR > AB$                       D.  $PQ > PQ + QR$

Answer:  \_\_\_\_\_

## II. Answer the following questions

8 x 1 = 8

9. Write the number that is to be multiplied to  $3 + \sqrt{3}$  to make it rational number.

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10. How many straight lines can be drawn that passes through two distinct points ?

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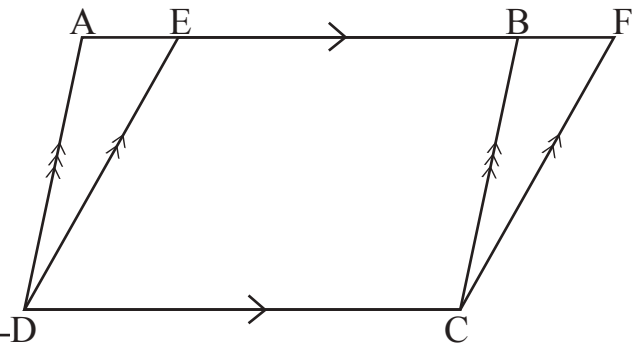
11. Write the sum of interior angles of a trapezium.

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12. In the given figure, if the area of parallelogram ABCD is  $42 \text{ cm}^2$  then find the area of parallelogram EFCD.




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13. Write the expanded form of  $(x + y + z)^2$ .

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14. Write the distance of a point P (- 3, 8) from x-axis.

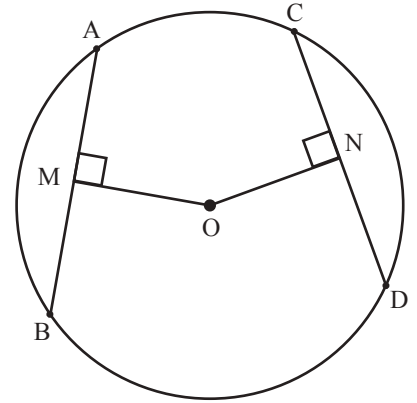
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15. In the given figure  $AB = CD$  and  $ON = 3$  cm.  
Find the length of  $OM$ .



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16. Find the volume of a cube whose edges are 9 cm each.

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**III. Answer the following questions**

**8 x 2 = 16**

17. Express  $0.\overline{3}$  in the form of  $\frac{p}{q}$  (here,  $p$  and  $q$  are co-primes).

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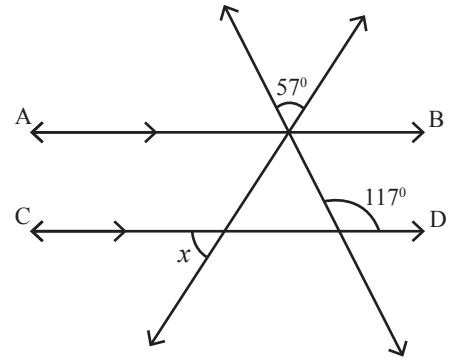
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18. In the given figure  $AB \parallel CD$ . Find the value of  $x$ .




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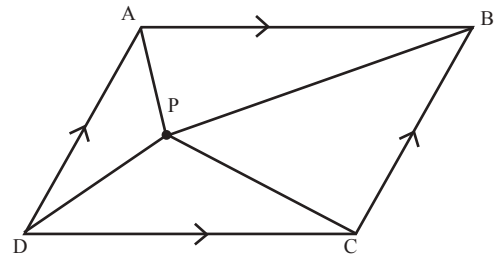


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19. In the given figure, if  $p$  is any point in the interior of a parallelogram  $ABCD$ , then show that  $\text{ar}(\triangle ABP) + \text{ar}(\triangle PCD) = \frac{1}{2} \text{ar}(\square ABCD)$ .




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21. The below table contains the marks scored by 50 students of a class in mathematics examination. Draw a histogram for the given data.

<b>Marks</b>	<b>0 - 10</b>	<b>10 - 20</b>	<b>20 - 30</b>	<b>30 - 40</b>	<b>40 - 50</b>
<b>Frequency</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>12</b>	<b>8</b>



22. One day a man observes 230 two wheeler, 160 three wheeler and 70 four wheeler vehicles passing in front of his shop. Find the probability of the vehicle observed by him is a two wheeler.

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23. The curved surface area of a right circular cylinder of height 14 cm is  $176 \text{ cm}^2$ . Find the diameter of the base of the cylinder.

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## IV. Answer the following questions

9 x 3 = 27

25. Represent  $\sqrt{5.6}$  on number line.

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27. Prove that "a diagonal of a parallelogram divides it into two congruent triangles".

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29. If  $x+y+z=0$ , then prove that  $x^3+y^3+z^3=3xyz$

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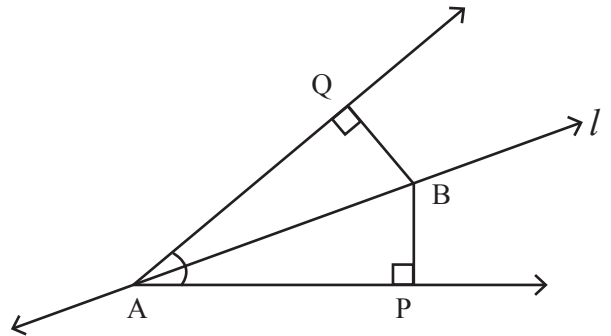
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30. In the given figure line  $l'$  is the bisector of an angle A and B is any point on  $l'$ . BP and BQ are the perpendiculars from B to the arms of  $\angle A$ . Show that  $BP = BQ$ .



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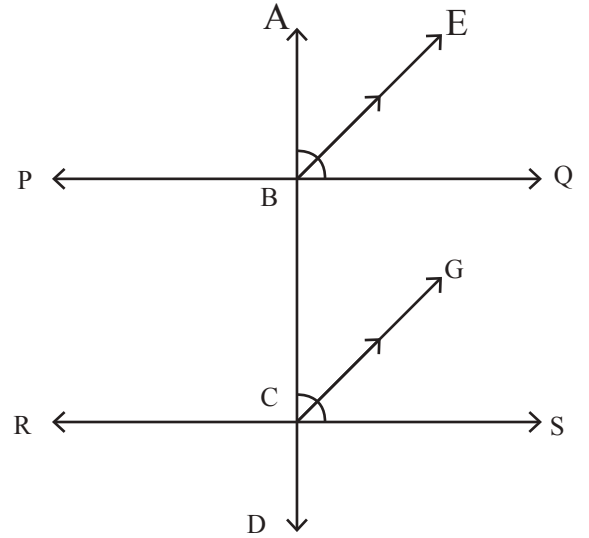
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31. Draw the graph for the linear equation  $2x+y=7$ .



32. In the given figure, BE the bisector of  $\angle ABQ$  is parallel to the CG the bisector of  $\angle BCS$ .  
Prove that  $PQ \parallel RS$ .



33. A triangular shaped land is to be divided equally among three persons. The length of its two sides are 100m and 160m and perimeter is 360m. Find the area of land that each person would get.

**V. Answer the following questions****4 x 4 = 16**

34. Construct a triangle XYZ in which  $\angle Y = 30^\circ$ ,  $\angle Z = 90^\circ$  and  $XY + YZ + ZX = 11\text{cm}$

35. 30 children were asked about the number of hours they used mobile in the last month. The results are recorded as follows

5, 10, 11, 16, 15, 8, 21, 26, 14, 6, 8, 9, 10, 14, 20, 10,

12, 11, 3, 7, 12, 19, 28, 30, 8, 12, 17, 16, 10, 12.

Construct a grouped frequency distribution table with class intervals as 0-5, 5-10... etc (of equal size). With the help of this table answer the following questions.

1. Find the number of students who used mobile less than 10 hours ?
2. Find the number of students who used mobile more than 25 hours ?

36. Prove that "Angles opposite to equal sides of an isosceles triangle are equal."

37.  $x-1$  is one of the factor of  $p(x) = 4x^2-3x-k$ . Find the value of  $K$ . Also find another factor for the given polynomial.

**VI. Answer the following question****1 x 5 = 5**

38. The circumference and height of a right circular cylinder are 44 cm and 24 cm respectively. Find its volume. Also find the volume and curved surface area of the cone whose radius and height are same as given cylinder.

