



## MATHS

## **BOOKS - UNIQUE MATHS (HINGLISH)**

# **COVERAGE STANDARD QUESTION**

**1 Mark Questions** 

1. Write the properties of congruent segments.

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2. Co-ordinate of A is at 5 unit and if co-ordinate of B is -6 unit then find

distance between AB.

3. Write the following statement 'If-then' form The diagonals of rectangle

are congruent.





**11.** Write the converse of, "the alternate angles formed by two parallel lines and their transversal are congruent."

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**12.** Write the converse of, "if the corresponding angles formed by a transversal of two lines are congruent, then two lines are parallel."

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13. Coordinate of point P on a number line is 5. What are the co-ordinates

of points on the number line which are a distance of 8 units from P?



14. Write the following statements in conditional form, "every rectangle is

a parallelogram.



15. Write the following statements in conditional form, "chords, which are

equidistant from the centers of congruent circles, are congruent."



16. d(A, B) = 5cm, d(B, C) = 11 cm, d(A, C) = 6 cm which of the points is

between the other two?

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17. How many mid points does the segment have?



**18.** Write converse of the following statement: If a pair of the interior angles made by a transversal of two lines are supplementary then the lines are parallel.

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- **19.** Write in conditional form:
- (i) Every rhombus is a square.
- (ii) Interior angles are supplementary to each other.

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**20.** On the number line, points A, B,C are such that d(A, C) = 10, d(C, B) = 8,

find the d(A,B) considering all possibilities.

**21.** If A -B-C and I (AC)=11,I(BC)=6.5 then find I(AB).



22. Draw a number line and denote the following points on number line

-3,5,7,-6



23. From the information given below find which of the point is between

the other two. If the points are not colinear, state so,

d(DE) =5, d(EF) =8, d(DF) =6

d(PR) =7, d(PQ) =10, d(QR) =3

**24.** Point M, N, O are co-linear such that d(M, N) = 10, d(N, O) = 18. Find d(M, O) = 10.

O) =?



25. When given two lines are parallel. If one angle of two interior angle is

 $70\,^\circ$  then find the measure of second interior angle.

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27. If two lines are not intersect each other then the lines are......

**28.** The sum of the two angles of the triangle is  $90^{\circ}$  then find the third

angle?



29. Two parallel lines are intersected by an transverse. If measure of one

of the alternate angle is  $85^{\circ}$ . Find measure of other angle.

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**30.** In 
$$\triangle PQR, \angle P = 76^{\circ}, \angle Q = 48^{\circ}, \angle R = ?$$

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**31.**  $\angle XYZ$  and  $\angle PQR$  are a complementary of each other then find  $\angle XYZ + \angle PQR = ?$ 

**32.** In  $\triangle PQR, PQ = 10cm, PR = 5cm, QR = 12cm$ . Find out the greatest and the smallest angle of triangle.



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34. riangle PQR, PQ = 12cm, QR = 14cm, PR = 8cm. Find out the

greatest and the smallest angle of the triangle.

35.  $riangle SUN, riangle S=85^\circ, riangle U=45^\circ$  greatest and the smallest side of

the triangle.



**36.** Which of the following is not the test of congruence of two triangles ?

ASA test ,AAS test, SSA test , SAS test.

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**37.** riangle XYZ  $\sim LMN$ . Write the corresponding angles of the triangles

and also write the ratio of the corresponding sides.



**38.**  $riangle ABC \sim riangle PQR$ , if AB=4cm, BC=6cm, AC=5cm, and PQ=8cm`, then

find the length of remaining side.





**43.** State the type of quadrilaterals. Name them.

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<b>44.</b> Write the any two properties of square.
<b>O</b> Watch Video Solution
<b>45.</b> Draw a trapezium and state the pair of parallel side
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<b>46.</b> $PQRS$ is parallelogram. $\angle Q$ is $70^\circ$ , then find $\angle S$ .
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<b>47.</b> If one side of rhombus is 8.5 cm. Find perimeter of rhombus.

**48.** In  $\Box$  IJKL, side IJ|| side KL,  $\angle I = 108^\circ$ ,  $\angle K = 53^\circ$ . Find measure of  $\angle J, \angle L$ 

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**49.** The adjacent sides of a rectangle are 7 cm and 24 cm . Find the length

of its diagonal.

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**50.** The diagonals are perendicular to each other. ' In which of the following quadrilaterals is the following property observed ?

Rectangels, Rhombus, Kite, Isosceles tranpezium.





55. State the type of circle which touches all the sides of a triangle and

the circle passing through all the vertices of a triangle.

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<b>56.</b> The circle having the same center but with different radii is known as.
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57. If radius of a circle is 7 cm. Then find the diameter of a circle.

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58. Draw three concentric circles with different radii.

#### 59. How many chords we can draw a circle?

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60. If radius of circle is 4.8 cm. Find length of biggest chord.
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61. Two circles are intersect externally if radius of one circle is 3.5 cm and

other is 6.5 cm find the distance between their centres.

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62. Radius of circle is 10 cm. There are two chords of length 16 cm each.

What will be the distance of there chords from the center of circle.





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**65.** Radius of a circle with centre O is 4 cm. if /(OP) = 4.2 cm then state where point P will lie with respect to the circle.

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66. If the radius of the circumcircle of an equilateral triangle is 5 cm then

find the radius of its in circle.



**67.** If the length of the longest chord of a circle is 22 cm. Find the radius of a circle.

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<b>68.</b> The radius of the circle with the centre O is 2.3 cm and if the $OQ = 3.2$
cm then where is the point Q lies?
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<b>69.</b> The length of a chord of a circle is 16 cm and distance of chord is 15 cm from the center of the circle then find the radius of the circle.
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70. Fill in the blanks : tan $30^\circ  imes  an = 1$



**71.** If 
$$\tan \theta = 1$$
 then  $\tan(90 - \theta) = ?$ 

72. 
$$\frac{\cos 28^\circ}{\sin 62^\circ} = ?$$

73. If  $\sin 40^\circ = \cos A$  then find A.

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**74.** If  $\theta = 30^{\circ}$ , then  $\sin^2 \theta = ?$ 









**81.** Show that 
$$an heta imes an(90 - heta) = 1$$

#### 82.

$$riangle PQR, m \measuredangle P = 60^\circ, m \measuredangle R = 30^\circ, PR = 2a, PQ = aQR = ?$$

83. Which of the following statement is true?

$$(A) \sin heta = \cos(90 - heta)$$

(B) 
$$\cos \theta = \tan(90 - \theta)$$

In

(C)  $\sin\theta = \tan(90 - \theta)$ 

(D)  $\tan \theta = \tan(90 - \theta)$ 



84. 
$$\cos 45^\circ = \frac{1}{\sqrt{2}}$$
 and  $\sin 30^\circ = \frac{1}{2}$ . Find the value of  $\cos^2 45^\circ + \sin^2 30^\circ$ .

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85. If x-co-ordinate of point A is negative and y-co-ordinate is positive.

Then which quadrant point A lie?



87. If line line 'I' is parallel to y-axis then what is the equation of line 'I'.

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88. State which quadrant or on which axis do the point lie. A(-3,2) P(0,2)
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**89.** In which quadrant are the following points. Whose x-co-ordinate is positive and y co- ordinate is negative. Both co-ordinates are negative.

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90. Write equation of line parallel to y-axis and at a distance 7 units from

it to its left.



### **95.** In which quadrant does the point (-4,-3) lies.

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<b>96.</b> The equation of the x-axis is
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<b>97.</b> Find the surface area of sphere if radius is 9cm?
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<b>98.</b> {i}Find the curved surface area of cone if its base radius is 12 cm and slant height = 7 cm.

{ii} Find the surface area of the sphere if radius is 14 cm.

**99.** If l imes b imes h = 20 imes 12 imes 10, then find the volume of cuboid.

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100. If the length of the cube is 6 cm. Then find the total surface area of a

cube.

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**101.** The length , breadth and height of a cuboidal shaped box of medicine is 20 cm , 12 cm and 10 cm respectively . Find the total surface area of the box .

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**102.** Write the formula to find out the surface area of a solid hemisphere.

<b>103.</b> What is volume of sphere whose radius is 4 cm. $(\pi=3.14)$
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<b>104.</b> Write the formula to find volume of cuboid.
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<b>105.</b> Side of the cube is 4 cm. Find the surface area of all vertical faces and total surface area of the cube. Volume of cube is 1000 $cm^3$ . Find its side.
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<b>106.</b> If radius of cone is 7 cm. Find area of base of cone.



108. If curved surface area of a cone  $18753.6cm^3$  and slant height 20 cm

the find radius of base?

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**109.** If radius is r and height is h, then find curved surface area of cylinder.

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**110.** What is the total surface area of hemisphere if the radius of hemisphere is r.



**3.** Angles of triangle are in the ratio of 2:3:4 then find the measure of all angles.

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<b>4.</b> $\triangle$ XYZ~ $\triangle$ LMN. Write the corresponding angles of the triangles and also write the ratio of the corresponding sides.
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5. In  $riangle PQR, riangle Q = 90^\circ$ , PQ=12cm, QR=5cm and QS is a median, find I(QS).

6. The measure of triangle are  $x^{\circ}$ ,  $(x+10)^{\circ}$ ,  $(2x+10)^{\circ}$ . Find the measure of each angle.



7. Prove that an equilateral triangle is equiangular.

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8. Show that in a right angled triangle, the hypotenuse is the longest

side.

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9.  $riangle PQR, riangle Q = 90^{\circ}, PQ = 12, QR = 5, QS$  is a medium find l(QS).



13. If opposite angles of a rhombus are  $3x^{\circ}$  and  $\left(4x-20
ight)^{\circ}$  then find

the value of x.

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14. ABCD is parallelogram if  $\angle A = (4x+13)^{\,\circ}, \angle D = (5x-22)^{\,\circ}$  , then

find  $\angle B$ ,  $\angle C$ .

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**15.** Two adjacent sides of a parallelogram is 150cm. One of its sides is greater than the other by 25cm. Find the length of the sides of the parallelogram.



16. Diagonal of rhombus are 6 cm and 8 cm respectively, then find sides of

rhombus.



19. Diagonal AC of a parallelogram ABCD bisects A. Show that

it bisects C also



20. Diagonals of a parallelogram intersect each other at point Q. If AQ =5,

BQ =12and AB =13, then show that ABCD is a rhombus.

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21. The ratio of measure of two adjacent angle of parallelogram is 1:2.

Find the measure of all angles of the parallelogram.

**22.** The ratio of two adjacent side of parallelogram is 3:4 and its perimeter is 112 cm find the length of its each side.

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<b>23.</b> The diagonals of rhombus are 20 and 48 cm. Find the length of side.	

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24. Find area of circle whose diameter is 14cm.

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25. Radius of circle is 34 cm. And distance of chord from centre is 24 cm.

Find length of the chord?

**26.** Recall that two circles are congruent if they have the same radii. Prove that equal chords of congruent circles subtend equal angles at their centres.



**29.** 
$$\cos \theta = \frac{\delta}{10}$$
, then find  $\sin \theta$ .

**30.** Find the value of,  $2 \tan 45^\circ + \cos 30^\circ - \sin 60^\circ$ .



**31.** 
$$\frac{ an 60^{\circ}}{\sin 60^{\circ} + \cos 60^{\circ}} = ?$$
 find the value .

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**32.** 
$$If\sin\theta = rac{15}{17}, \cos\theta = ?$$

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$$\textbf{33.}\,\frac{\cos 28^{\circ}}{\sin 62^{\circ}}=~?$$

**34.** In right angled triangle XYZ if  $\angle Z = heta, \angle Y = 90^{\circ}, \cos heta = rac{24}{25}$ , Find

 $\sin\theta$  and  $\tan\theta$ 



**35.** If 
$$\tan \theta = \frac{1}{2\sqrt{2}}$$
 then find  $\sin \theta$  and  $\cos \theta$ .

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**36.** 
$$\frac{\cos 60^{\circ} \times \cos 30^{\circ} + \sin 60^{\circ} \times \sin 30^{\circ}}{2\sin 30^{\circ} \times \cos 0^{\circ} + \sin 90^{\circ}} = ?$$

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37. Find the value of,  $5 \sin 30^\circ + 3 \tan 45^\circ$  ,

**38.** Find the value of  $\frac{\cos 56^{\circ}}{\sin 34^{\circ}}$ .



**39.** If 
$$\tan \theta = \frac{12}{5}$$
, then  $5\sin \theta - 12\cos \theta = ?$ 

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**40.** Draw the co-ordinate system on a plane and plot the following points? L(-2,4), Q(6, -5)

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**41.** In which quadrant are the following points. A(3,5), B(-2, -7)

**42.** Write the equation of the line paraller to the y-axis at a distance of 7

units from it to its left.

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**43.** The point Q(3, -2), lie on a line parallel to the y-axis, Write the equation

of the line and draw its graph.

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44. How many lines are there which are paraller to the x-axis and having a

distance 5 units ? Write their equatons.



**45.** Draw the co-ordinate system on a plane and plot the following points.

(i) A(-2,4) (ii) B(6,-5)

(iii) C(0,-2) (iv) D(-3,-4)
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<b>46.</b> Complete the table for drawing the graph. 2x-y=1
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<b>47.</b> Which of equation given below has graph parallel to x-axis and which one have graph parallel to y-axis. (i) x=3, (ii) y-2=0
(iii) x+6=0 (iv) y=-5
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**48.** Draw the graph of equation, x+y =0

**49.** Without plotting points on graph state in which quadrant or on which axis do the following point lie, (0, -3), (4, -5), (5, 6), (-7,8)

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50. How many lines are there which are paraller to the x-axis and having a
distance 5 units ? Write their equatons.
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<b>51.</b> Prepare a table to draw graph of given equation 2x-y+1 =0
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**52.** What is the name of horizontal and the vertical lines draw to determine the position of any point in the cartesian plane.



**55.** Which of the equation given below have graph parallel to the x-axis and which one have graphs parallel to the y-axis?

(i) x =-6, (ii) y-4 = 0, (iii) y = 6





57. If the radius of a solid hemisphere is 5 cm. Then find its curved surface

area. ( $\pi = 3.14$ )

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**58.** Find the volume of a sphere, if its surface area is 154.59 sq. cm.

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**59.** If area of base of cone is 1386 sq. cm. Find its radius.



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cm. Find the height of the cylinder. \left(\pi=rac{22}{7}
ight)
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**61.** Find the volume of cone if its total surface area is 7128 sq. cm and radius of base is 28 cm.

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62. Total surface area of cube is 5400 sq. cm. Find surface area of all

vertical faces of the cube.



**63.** Volume of hemisphere is  $18000\pi cm^3$ . Find its diameter.



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**66.** Find the volume of a cone if its total surface area is 7128  $cm^2$ ? and

radius of base is 28cm 
$$\left(\pi=rac{22}{7}
ight)$$

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67. What will be the volume of a cube having length of edge 7.5 cm?



**71.** The volume of a cylinder is 200  $cm^3$  . Its height is 10 cm . Find the area

of its base.

**72.** Find the volume of hemisphere with diameter 6 cm .  $(\pi=3.14)$ 



**73.** If r =6,I= 8 cm then find the total surface area of the cone?