



MOST EXPECTED 125 QUESTIONS FOR CLASS 10 CBSE BOARD EXAM 2026

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MOST EXPECTED QUESTIONS FOR CLASS 10_MATHS BOARD EXAM

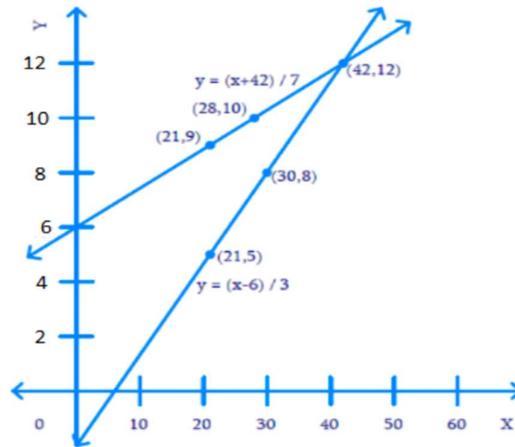
- Given the HCF (306, 1314) = 18. Find LCM (306, 1314).
Ans: 22,338
- Explain why $(7 \times 13 \times 11) + 11$ and $(7 \times 6 \times 5 \times 4 \times 3 \times 2 \times 1) + 3$ are composite numbers.
- Prove that $\sqrt{3}$ is an irrational number. Hence, show that $7 + 2\sqrt{3}$ is also an irrational number.
- Check whether 6^n can end with the digit 0 for any natural number n.
- There is a circular path around a sports field. Sonia takes 18 minutes to drive one round of the field, while Ravi takes 12 minutes for the same. Suppose they both start at the same point and at the same time, and go in the same direction. After how many minutes will they meet again at the starting point?
Ans: 36 minutes
- Prove that $\sqrt{3} + \sqrt{2}$ is irrational.
- Prove that $\sqrt{3}$ is an irrational number. Hence, show that $7 + 2\sqrt{3}$ is also an irrational number.
- If sum of the zeroes of the quadratic polynomial $3x^2 - kx + 6$ is 3, then find the value of k.
Ans: k=9
- If α and β are the zeroes of a polynomial $x^2 - 4\sqrt{3}x + 3$, then find the value of $\alpha + \beta - \alpha\beta$
Ans: $4\sqrt{3}-3$
- Find the value of a and b, if they are the zeroes of polynomial $x^2 + ax + b$.
Ans: a=1, b= -2
- If one zero of the polynomials $2x^2 + 3x + \lambda$ is $\frac{1}{2}$ find the value of λ and the other zero.
Ans: $\lambda = -2$ and other zero of -2
- If α and β are zeroes of $x^2 - (k - 6)x + 2(2k - 1)$, find the value of k if $\alpha + \beta = \frac{1}{2}\alpha\beta$
Ans: k= -5
- If one of the zero of a polynomial $3x^2 - 8x + 2k + 1$ is seven times the other, find the value of k.
Ans: k= -1/3
- Quadratic polynomial $2x^2 - 3x + 1$ has zeroes as α and β . Now form a quadratic polynomial whose zeroes are 3α and 3β .
Ans: $2x^2 - 9x + 9$
- If α and β are the zeroes of the polynomial $p(x) = 2x^2 + 5x + k$ satisfying the relation, $\alpha^2 + \beta^2 + \alpha\beta = \frac{21}{4}$, then find the value of k.
Ans: k=2

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16. Find the other zeroes of the polynomial $x^4 - 5x^3 + 2x^2 + 10x - 8$ if it is given that two of its zeroes are $-\sqrt{2}$ and $\sqrt{2}$.
- Ans:** 1 and 4
17. If two zeroes of the polynomial $p(x) = x^4 - 6x^3 - 26x^2 + 138x - 35$ are $2 \pm \sqrt{3}$ Find the other zeroes.
- Ans:** 7 and -5
18. Is the system of linear equation $2x+3y-9=0$ and $4x+6y-18=0$ consistent? Justify your answer.
- Ans:** consistent
19. For what value of k, $2x + 3y = 4$ and $(k + 2)x + 6y = 3k + 2$ will have infinitely many solutions?
- Ans:** k=2
20. Aftab tells his daughter, '7 year ago, I was seven times as old as you were then. Also, 3years form now, I shall be three times as old as you will be. Represent this situation algebraically and graphically.

Ans: $x-7y+42=0$ and $x-3y-6=0$

The graphical representation is as follows.



x axis: 1 unit = 10 years, y axis: 1 unit = 2 years

21. Draw the graphs of the equations $x - y = 0$ and $3x + 2y - 12 = 0$. Determine the co-ordinates of the vertices of the triangle formed by these lines and the X-axis and shade the triangular region.
22. Solve: $99x + 101y = 499$
 $101x + 99y = 501$

Ans: $(x,y) = (3,2)$

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23. A part of monthly hostel charge is fixed and the remaining depends on the number of days one has taken food in the mess. When Swati takes food for 20 days, she has to pay Rs. 3,000 as hostel charges whereas Mansi who takes food for 25 days Rs, 3,500 as hostel charges. Find the fixed charges and the cost of food per day.

Ans: The fixed monthly hostel charge is Rs. 1,000,
and the cost of food per day is Rs. 100.

24. The taxi charges in a city consist of a fixed charge together with charge for the distance covered. For a distance of 10 km, the charge paid is Rs. 105 and for a journey of 15km the charge paid is Rs. 155. What are the fixed charges and the charge per km? How much does a person have to pay for travelling a distance of 25 km?

Ans: The fixed charge is Rs. 5, the charge per km is Rs. 10, and the total amount to be paid for travelling 25 km is Rs. 255

25. Five years hence, the age of Jacob will be three times that of his son. Five years ago, Jacob's age was seven times that of his son. What are their present ages?

Ans: Present Age of Jacob is 40 years & hi son is 10 years.

26. The sum of the digits of a two-digit number is 9. Also, nine times this number is twice the number obtained by reversing the order of the digits. Find the number.

Ans: 18

27. A lending library has fixed charge for the first three days and an additional charge for each day thereafter. Saritha paid Rs. 27 for a book kept for seven days, while Susy paid Rs. 21 for the book she kept for five days. Find the fixed charge and the charge for each extra day.

Ans: The fixed charge for the first three days is Rs. 15, and the charge for each additional day is Rs. 3

28. Places A and B are 100km apart on a highway one car starts from A and another form B at the same time. If the cars travel in the same direction at different speeds, they meet in 1hr. what are the speeds of the two cars?

Ans: 60km/hr and 40km/hr

29. A train covered a certain distance at a uniform speed. If the train would have been 10km/hr faster, it would have taken 2 hr less than the scheduled time. And, if the train were slower by 10km/hr, it would have taken 3hr more than the scheduled time. Find the distance covered by the train.

Ans: 600 km

30. Find the value of k for which the roots of the quadratic equation $2x^2 + kx + 8 = 0$ will have the equal roots?

Ans: k= 8 and k= -8

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31. Solve for x:

$$\frac{1}{x+1} + \frac{2}{x+2} = \frac{4}{x+4}$$

Ans: $x=2+2\sqrt{3}$ or $x=2-2\sqrt{3}$

32. Two pipes running together can fill a tank in $11\frac{1}{9}$ minutes. If one pipe takes 5 minutes more than the other to fill the tank, find the time in which each pipe would fill the tank separately.

Ans: The faster pipe takes 20 minutes and the slower pipe takes 25 minutes to fill the tank separately.

33. A train travels at a certain average speed for a distance of 54km and then travels a distance of 63 km at an average speed of 6km/h more than the first speed. If it takes 3 hours to complete the total journey, what is its first speed?

Ans: the train's first average speed is 36km/hr

34. A truck covers a distance of 150km at a certain average speed and then covers another 200 km at average speed which is 20 km per hour more than the first speed. If the truck covers the total distance in 5 hours, find the first speed of the truck.

Ans: The first speed of the truck is 60km/hr

35. A motorboat whose speed in still water is 18 km/h, takes 1hour more to go 24 km upstream than to return downstream to the same spot. Find the speed of the stream.

Ans: 6km/hr

36. Find the non-zero value of k, for which the quadratic equation $kx^2 + 1 - 2(k-1)x + x^2 = 0$, has equal roots. Hence find the roots of the equation.

Ans: non-zero value of k is 3, and the equal roots of the equation are $x = \frac{1}{2}$.

37. If the quadratic equation, $(1 + a^2)b^2x^2 + 2abcx + (c^2 - m^2) = 0$, in x has equal roots, prove that $c^2 = m^2(1 + a^2)$.

38. Solve $\frac{1}{(a+b+x)} = \frac{1}{a} + \frac{1}{b} + \frac{1}{x}$, $a + b \neq 0$.

39. A pole has to be erected at a point on the boundary of circular park of diameter 17m in such a way that the difference of its distance from two diametrically opposite fixed gates A and B on the boundary is 7 meters. Find the distances from the two gates where the pole is to be erected.

Ans: The distances from the two gates where the pole is to be erected are 15m and 8m.



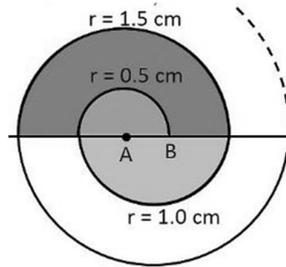
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40. In a rectangular part of dimensions $50m \times 40m$ a rectangular pond is constructed so that the area of grass strip of uniform breadth surrounding the pond would be $1184 m^2$. Find the length and breadth of the pond.
- Ans:** The length and breadth of the pond are 34 m and 24 m, respectively.
41. For what value of k; $k+2$, $4k-6$, $3k-2$ are three consecutive terms of an A.P.
- Ans:** $k=3$
42. Is 184 a term of the sequence 3,7,11...?
- Ans:** 184 is not a term in the given A.P
43. In a certain A.P 32^{th} term is twice the 12^{th} term. Prove that 70^{th} term is twice the 31^{th} term.
44. Divide 56 in four parts in A.P such that the ratio of the product of their extremes (1^{st} and 4^{th}) to the product of means (2^{nd} and 3^{rd}) is 5:6.
- Ans:** The four parts of 56 in Arithmetic Progression (A.P.) are 8, 12, 16, and 20.
45. If the sum of n terms of an A.P is $2n^2 + 5n$, then find the 4^{th} term.
- Ans:** 19
46. In an A.P. the sum of the first n terms is $\frac{3n^2}{2} + \frac{13}{2}$. Find the 25^{th} term.
- Ans:** 80
47. Which term of the progression $20, 19\frac{1}{4}, 18\frac{1}{2}, 17\frac{3}{4}, \dots$ is the first negative.
- Ans:** 28^{th} term
48. How many terms of the A.P. 18, 16,14,...be taken so that their sum is zero?
- Ans:** 19
49. A thief runs with a uniform speed of 100m/min. After one minute a policeman runs after, the thief to catch him. He goes with a speed of 100m/min in the first minute and increases his speed by 10 m/min every succeeding minute. After how many minutes the policeman will catch the thief.
- Ans:** The policeman will catch the thief in 5 minutes after he starts running.
50. The sum of the 3^{rd} and 7^{th} terms of an A.P. is 6 and their product is 8. Find the sum of first 20 terms of the A.P.
- Ans:** The sum of the first 20 terms of the A.P. is either 115.
51. How many three-digit natural numbers are divisible by 7?
- Ans:** 128

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52. A spiral is made up of successive semi-circles with centres alternately at A and B starting with A, of radii 0.5cm, 1.0cm, 1.5cm, 2.0cm....as shown in the figure. What is the total length of spiral made up of eleven consecutive semi-circles?(use $\pi = 22/7$)

Ans: 143 cm



53. Which term of the AP: 21, 18, 15, ... is -81? Also, is any term 0? Give reason for your answer.
 54. Determine the AP whose third term is 16 and the 7th term exceeds the 5th term by 12.

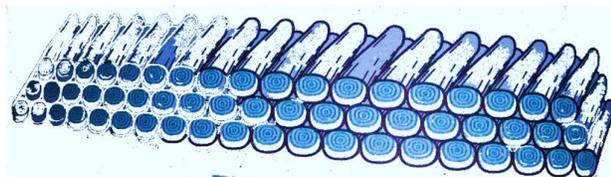
Ans: the AP is 4, 10, 16, 22

55. The 13th term of an A.P. is four times its 3rd term. If the fifth term is 16, then find the sum of its first ten terms.

Ans: 175

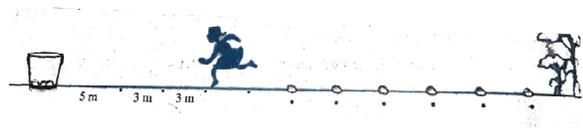
56. 200 logs are stacked in the following manner: 20 logs in the bottom row, 19 in the next row, 18 in the row next to it and so on fig. In how many row are the 200 logs placed and how many logs are in the top row?

Ans: 200 logs can be placed in 16 rows.
 The number of logs in the top row is 15.



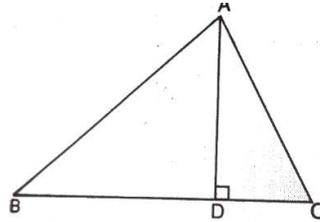
57. In a potato race, a bucket is placed at the starting point, which is 5m from the first potato, and the other potatoes are placed 3m apart in a straight line. There are ten potatoes in the line in fig.

Ans: 370m



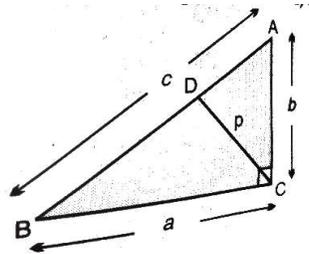
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58. In $\triangle ABC$, $AD \perp BC$, such that $AD^2 = BD \times CD$. Prove that $\triangle ABC$ is right angle at A.



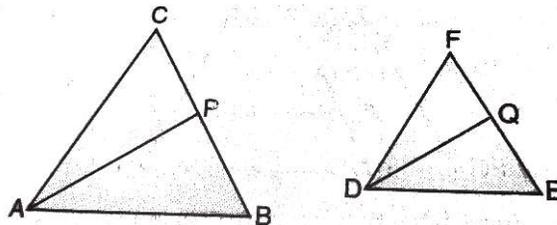
59. ABCD is trapezium in which $AB \parallel DC$ and its diagonal intersect each other at the point O. show that $\frac{AO}{BO} = \frac{CO}{DO}$.

60. ABC is a right triangle right angled at C. Let $BC=a$, $CA=b$, $AB=c$ and p be the length of perpendicular from C to AB. Prove that $cp=ab$.



61. $\triangle ABC$ is right angle at C. If p is the length of the perpendicular from C to AB and a, b, c are the length of the sides opposite $\angle A, \angle B$ and $\angle C$ respectively, then prove that $\frac{1}{p^2} = \frac{1}{a^2} + \frac{1}{b^2}$.

62. Given figure $\triangle ABC \sim \triangle DEF$. AP bisects $\angle CAB$ and DQ bisects $\angle FDE$.



Prove that:

(i) $\frac{AP}{DQ} = \frac{AB}{DE}$

(ii) $\triangle CAP \sim \triangle FDQ$.

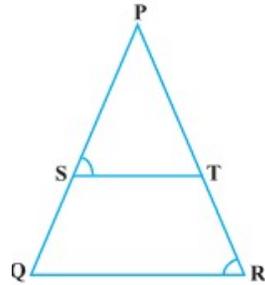
63. If AD and PM are medians of triangles ABC and PQR, respectively where $\triangle ABC \sim \triangle PQR$, then prove that $\frac{AB}{PQ} = \frac{AD}{PM}$.

64. Sides AB and AC and median AD of a triangle ABC are respectively proportional to sides PQ and PR and median PM of another triangle PQR. Show that $\triangle ABC \sim \triangle PQR$.

65. In fig. $\frac{PS}{SQ} = \frac{PT}{TR}$ and $\angle PST = \angle PRQ$. Prove that PQR is an isosceles triangle.

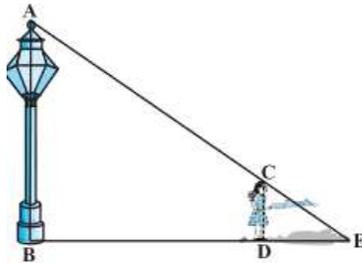


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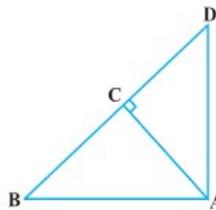


66. The diagonals of a quadrilateral ABCD intersect each other at the point O such that $\frac{AO}{BO} = \frac{CO}{DO}$. Show that ABCD is a trapezium.
67. A girl of height 90 cm is walking away from the base of a lamp-post at a speed of 1.2m/s. If the length of her shadow after 4 seconds.

Ans: After 4 seconds, the length of the girl's shadow is 1.6m.



68. In fig. ABD is triangle right angled at A and $AC \perp BD$. Show that
- $AB^2 = BC \cdot BD$
 - $AC^2 = BC \cdot DC$
 - $AD^2 = BD \cdot CD$



69. Find a relation between x and y such that the point $p(x, y)$ is equidistant from the points A(-5, 3) and B(7,2).

Ans: The relation between the point x and y $24x-2y-19=0$

70. Find the ratio in which the point (-3,k) divides the line segment joining the points (-5,-4) and (-2,3). Also find the value of k.

Ans: $K = \frac{2}{3}$ and the ratio is 2:1

71. Find the point on the x-axis which is equidistant from (2, -5) and (-2,9).

Ans: (-7, 0)

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72. Find the values of y for which the distance between the point $P(2, -3)$ and $Q(10, y)$ is 10 units.
Ans: 3 and -9

73. Find the ratio in which the y -axis divides the line segment joining the points $(5, -6)$ and $(-1, -4)$. Also find the point of intersection.
Ans: 5:1 and the point of intersection is $(0, -13/3)$

74. If $(1, 2)$, $(4, y)$, $(x, 6)$ and $(3, 5)$ are the vertices of a parallelogram taken in order, find x and y .
Ans: $x=6$ and $y=3$

75. Determine the ratio in which the line $2x+y-4=0$ divides the line segment joining the points $A(2, -2)$ and $B(3, 7)$.
Ans: 2:9

76. If A and B are $(-2, 2)$ and $(2, -4)$, respectively, find the coordinates of P such that $AP=3/7 AB$ and P lie on the line segment AB .
Ans: $(-2/7, -4/7)$

77. Evaluate:

$$\frac{3 \tan^2 30^\circ + \tan^2 60^\circ + \operatorname{cosec} 30^\circ - \tan 45^\circ}{\cot^2 45^\circ}$$

Ans: 5

78. If $4 \cos \theta = 11 \sin \theta$, find the value of $\frac{11 \cos \theta - 7 \sin \theta}{11 \cos \theta + 7 \sin \theta}$

Ans: 93/149

79. $\cos \theta + \sin \theta = \sqrt{2} \cos \theta$, show that $\cos \theta - \sin \theta = \sqrt{2} \sin \theta$.

80. Prove that: $\frac{\cos A}{1 - \tan A} + \frac{\sin A}{1 - \cot A} = \sin A + \cos A$.

81. Prove that:

$$\frac{\tan \theta}{1 - \cot \theta} + \frac{\cot \theta}{1 - \tan \theta} = 1 + \tan \theta + \cot \theta$$

82. Prove that:

$$\frac{\cos A}{1 + \tan A} - \frac{\sin A}{1 + \cot A} = \cos A - \sin A$$

83. Prove that:

$$\frac{1}{\operatorname{cosec} A - \cot A} - \frac{1}{\sin A} = \frac{1}{\sin A} - \frac{1}{\operatorname{cosec} A + \cot A}$$

84. If $\sec \theta = x + \frac{1}{4x}$, prove that $\sec \theta + \tan \theta = 2x$ or $\frac{1}{2x}$.

85. Prove that:

$$\frac{\operatorname{cosec} A}{\operatorname{cosec} A - 1} + \frac{\operatorname{cosec} A}{\operatorname{cosec} A + 1} = 2 \sec^2 A$$

86. Prove that:



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$$\frac{\tan \theta + \sec \theta - 1}{\tan \theta - \sec \theta - 1} = \sec \theta + \tan \theta$$

87. Prove that: $(\sin \theta + \operatorname{cosec} \theta)^2 + (\cos \theta + \sec \theta)^2 = 7 + \tan^2 \theta + \cot^2 \theta$.
88. If $\sec \theta + \tan \theta = p$, show that $\sec \theta - \tan \theta = \frac{1}{p}$. Hence, find the value of $\cos \theta$ and $\sin \theta$

Ans:

$$\cos \theta = \frac{2p}{p^2 + 1} \text{ and } \sin \theta = \frac{p^2 - 1}{p^2 + 1}$$

89. A straight highway leads to the foot of a tower. A man standing on it top observes a car at an angle of depression of 30° , which is approaching the foot of the tower with a uniform speed. 6 seconds later, the angle of depression of the car becomes 60° . Find the time taken by the car to reach the foot of tower from this point.

Ans: 3 seconds.

90. From the top of a 7 m high building, the angle of elevation of the top of a tower is 60° and the angle of depression of its foot is 45° . Find the height of the tower. [use $\sqrt{3} = 1.73$]

Ans: The height of the tower is 19.11m.

91. Two points A and B are on the same side of a tower and in the same straight line with its base. The angle of depression of these points from the top of the tower are 60° and 45° respectively. If the height of the tower is 15 m, then find the distance between these points.

Ans: 6.34m approx.

92. An angle of elevation of a cloud from a point 60m above the surface of the water of a lake is 30° and the angle of depression of its shadow in water is 60° . Find the height of the cloud from the surface of water.

Ans: 120m.

93. A statue 1.6 m tall stands on the top of a pedestal. From a point on the ground the angle of elevation of the top of the statue is 60° and from the same point the angle of elevation of the top of the pedestal is 45° . Find the height of the pedestal.

Ans: 2.19m

94. A vertical tower stands on a horizontal plane and is surmounted by a flagstaff of height 5m. from a point on the ground the angles of elevation of the top and bottom of the flagstaff are 60° and 30° respectively. Find the height of the tower and the distance of the point from the tower. [use $\sqrt{3} = 1.73$]

Ans: The height of the tower is 2.5m and the distance from the point on the ground to the tower is approximately 4.33m.

95. Two poles of equal heights are standing opposite to each other on either side of a road, which is 80 m wide. From a point between them on the road, angles of elevation of their top are 30° and 60° . Find the height of the poles and distance of point from poles.

Ans: height 34.64m and the distances of point from the poles are 20m and 60m.

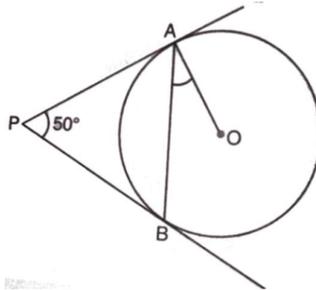
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96. The angle of depression of the top and bottom of an 8 m tall building from top of a multi-storeyed building from top of a multi-storeyed building are 30° and 45° , respectively. Find the height of multi-storeyed building and distance between two buildings.

Ans: $4(3+\sqrt{3})$

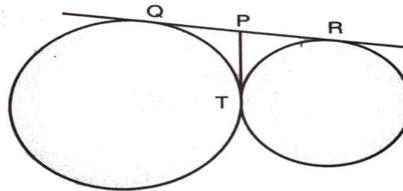
97. In the fig, PA and PB are tangents to the circle with center O such that $\angle APB = 50^\circ$. Write the measure of $\angle OAB$.

Ans: 25



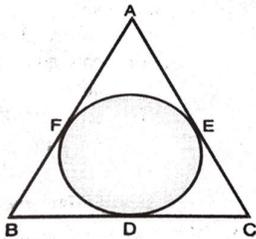
98. In the figure, QR is a common tangent to given circle which meet at T. Tangent at T meets QR at P. If QP=3.8cm, then find length of QR.

Ans: 7.6

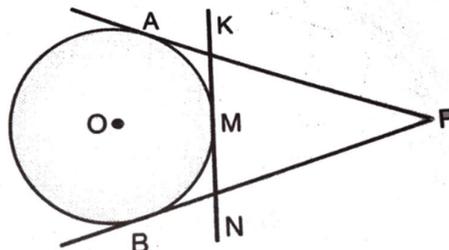


99. A triangle ABC is drawn to circumscribe a circle. If AB=13cm, BC=14cm and AE=7cm, then find AC.

Ans: 15

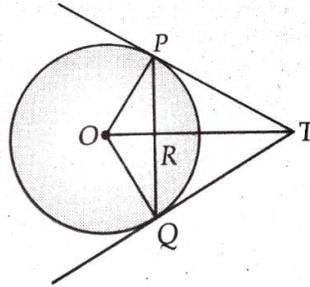


100. PA and PB are tangents from point P to the circle with centre O as shown in figure. At point M, a tangent is drawn cutting PA at K and PB at N. Prove that $KN=AK+BN$.



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101. ABC is a triangle. A circle touches sides AB and AC produced and side BC at X, Y and Z respectively. Show that $AX = \frac{1}{2}$ perimeter of $\triangle ABC$.
102. a, b and c are the sides of a right triangle, where c is the hypotenuse. A circle, of radius r, touches the sides of the triangle. Prove that $r = \frac{a+b-c}{2}$.
103. If fig, PQ is a chord of length 8 cm of a circle of radius 5cm. The tangents drawn at P and Q intersect at T. Find the length of TP. **Ans: 20/3 cm**



104. Prove that the parallelogram circumscribing a circle is a rhombus.
105. A toy is the form of a cone surmounted on a hemisphere of common base of diameter 7cm. If the height of the toy is 15.5cm, find the total surface area of the toy. [Use $\pi = \frac{22}{7}$]
- Ans: 214.5 sq.cm**
106. A solid sphere of diameter 6cm is dropped in a right circular cylindrical vessel partly filled with water. The diameter of the cylindrical vessel is 12cm. If the sphere is completely submerged into water, how much will the level of water rise in the cylindrical vessel?
- Ans: 1 cm**
107. Water in a canal 6m wide and 1.5 m deep is flowing with a speed of 10 km/h. How much area in hectare will it irrigate in 30 minutes if 8cm of standing water is needed?
- Ans: 562500 sqm.**
108. Water is flowing at the rate of 15km/hr through a cylindrical pipe of diameter 14cm into a cuboidal pond which is 50 m long and 44 m wide. In what time the level of water in pond rise by 21 cm?
- Ans: 2 hr**
109. A solid metallic cylinder of radius 3.5 cm and height 14cm is melted and recast into a number of small solid metallic balls, each of radius $\frac{7}{12}$ cm. Find the number of balls so formed.
- Ans: 648**
110. A well of diameter 4m dug 21m deep. The earth taken out of it has been spread evenly all around it in the shape of a circular ring of width 3m to form an embankment. Find the height of the embankment.

Ans: 4 m

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111. A cylindrical tub, whose diameter is 12cm and height 15 cm is full of ice-cream. The whole ice-cream is to be divided into 10 children in equal ice-cream cones, with conical base surmounted by hemispherical top. If the height of conical portion is twice the diameter of base, find the diameter of conical part of ice-cream cones.

Ans: 6 cm

112. A hemispherical tank, of diameter 3m, is full of water. It is being emptied by a pipe at the rate of $3\frac{4}{7}$ liter per second. How much time will it take to make the tank half empty? [Use $\pi = \frac{22}{7}$]

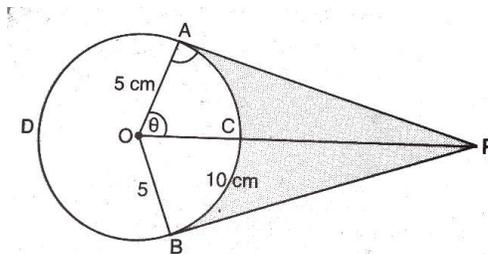
Ans: 16.5 min

113. A sphere of diameter 12 cm, is dropped in a right circular cylindrical vessel, partly filled with water. If the sphere is completely submerged in water, the water level into the cylindrical vessel rises by $3\frac{5}{9}$ cm. Find the diameter of the cylindrical vessel.

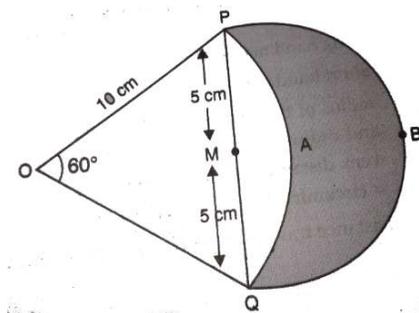
Ans: 18 cm

114. An elastic belt is placed around the rim of a pulley of radius 5cm. From one point C on the belt, elastic belt is pulled directly away from the centre O of the pulley until it is at P, 10 cm from the point O. Find the length of the belt that is still in contact with the pulley. Also find the shaded area. (Use $\pi = 3.14$ and $\sqrt{3} = 1.732$)

Ans: Length-20.93 & Area -17.09 sq.cm



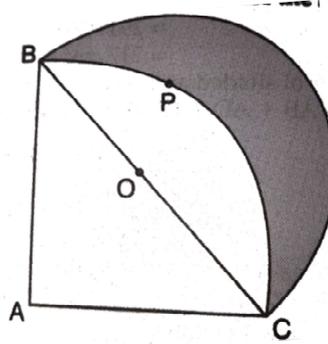
115. Figure shows two arcs PAQ and PBQ. Arc PAQ is a part of circle with centre O and radius OP while arc PBQ is semi-circle drawn on PQ as diameter with centre M. If $OP=PQ=10$ cm show that area of shaded region is $25\left(\sqrt{3} - \frac{\pi}{6}\right) \text{ cm}^2$.



116. In given fig. ABPC is quadrant of a circle of radius 14cm and a semicircle is drawn with BC as diameter. Find the area of the shaded region.

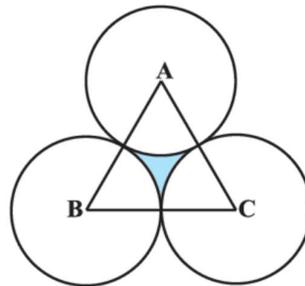
MOST EXPECTED QUESTIONS FOR CLASS 10 MATHS BOARD EXAM

Ans – 98 sq.cm.



117. The area of an equilateral triangle ABC is 17320.5 cm^2 . With each vertex of the triangle as centre, a circle is drawn with radius equal to half the length of the side of the triangle (see Fig. 12.28). Find the area of the shaded region. (Use $\pi = 3.14$ and $\sqrt{3} = 1.73205$)

Ans-1620.5 sq.cm.



118. If the mean of the following data is 14.7, find the values of p and q.

Class	0-6	6-12	12-18	18-24	24-30	30-36	36-42	Total
Frequency	10	p	4	7	q	4	1	40

119. Median of a data is 52.5 and its mean is 54, use empirical relationship between three measures of central tendency to find its mode.

Ans: 49.5

120. Find the mean, median & mode of the following distribution:

Classes	25-30	30-35	35-40	40-45	45-50	50-55
Frequency	25	34	50	42	38	14

Ans: Mean – 36.39 Median- 39.25 Mode- 38.33

121. A bag contains 3 red balls, 2 green balls, and 5 blue balls. One ball is drawn at random. Find the probability that the ball drawn is:

(i) red (ii) not green (iii) blue

Ans: i) $\frac{3}{10}$ ii) $\frac{4}{5}$ iii) $\frac{1}{2}$

MOST EXPECTED QUESTIONS FOR CLASS 10_MATHS BOARD EXAM

122. A single throw of a dice: find the probability of getting

- (i) a number greater than 2 (ii) a prime number (iii) a number not greater than 2

Ans: i) $\frac{2}{3}$ ii) $\frac{1}{2}$ iii) $\frac{1}{3}$

123. A die is thrown once. Find the probability of getting:

- (i) a number divisible by 3
(ii) a prime number less than 5
(iii) a composite number

Ans: i) $\frac{1}{3}$ ii) $\frac{1}{3}$ iii) $\frac{1}{3}$

124. Two dice are thrown together. Find the probability of getting:

- (i) a sum of 7
(ii) a sum less than 5
(iii) a sum greater than 10

Ans: i) $\frac{1}{6}$ ii) $\frac{1}{6}$ iii) $\frac{1}{12}$

125. l and m are two parallel tangents at A and B. The tangent C makes an intercept DE between l and

m. Prove that angle DFE= 90 degree.