PREVIOUS YEARS QUESTIONS PAPERS (Year : 2020-2025)

CLASS – 9th(Mathemaics)

CHAPTER-1 (NUMBER SYSTEMS)

1.Mark questions years 2020

1.Name the decimal expansion in $\frac{329}{400}$

2. Divide $8\sqrt{15}$by $2\sqrt{3}$

3.State with reason whether the given statement is true OR false .

Every real number is an irrational number.

2 MARK QUESTION YEARS 2020

1.Find the value of $32^{2/5}$

2.Express $\overline{0.3}$ in the form of $\frac{p}{q}$ where p,q are integer (q≠ 0)

1.Mark question years 2024

1.Every whole number is : (a) an integer (b) a natural number (c) a rational number

2.Write the coefficient of x^2 in $\frac{\pi}{2}x^2$ + x : (a) $\frac{1}{2}$ (b) π (c) $\frac{\pi}{2}$

3.The zeroes of polynomial p(x) = x + 5 (a) 5 (b) -5 (c) 0

2.Mark questions years 2024

1. Simplify each of the following expressions:(3+√3)(2+√2)

2.Show how $\sqrt{5}$ can be represented on the number line .

2.Mark questions years 2024

1.Rationalize the denominators: $\frac{1}{\sqrt{7}+2}$

3.Mark questions years 2024

1.Express 0. $\overline{6}$ in the form of $\frac{p}{q}$ where p and q are integer and q ≠ 0 .

1.Mark questions years 2025

1.Which of the following is a rational number?

(a) 2 - $\sqrt{5}$ (b) $\frac{1}{\sqrt{2}}$ (c) $\frac{2\sqrt{7}}{7\sqrt{7}}$

2.Mark questions years 2025

1. Rationalize the denominators: $\frac{1}{\sqrt{7}-\sqrt{2}}$

2.Mark questions years 2025

1.Name the decimal expansion in $\frac{329}{400}$

CHAPTER -2 (POLYNOMIALS)

3 MARKS QUESTIONS YEARS (2020)

3.Evaluate 103× 107 without multiply directly.

4.Expand $(2a - 3b)^3$by using suitable identity.

5.Find the value of k when (x – 1) is factor of p(x)= $x^2 + x + k$.

6.Find the following from given polynomial $x^6 - 3x^4 + 2x^3 - 1$

3 MARKS QUESTIONS YEARS (2024)

1.Find the value of k when (x – 1) is factor of p(x)= $x^2 + x + k$.

2.Determine has (x – 1) is a factor of x^4+ $3x^3$+ $3x^2$+ x + 1

(a) Degree of the polynomial (b) variable in polynomial (c) number of terms (d) The coefficient of x^4

8.Factorise $3x^2 - x - 4$

1 MARKS QUESTIONS YEARS (2024)

1.If x = 2, y = 1 is a solution of the equation 2x + 3y = k, then the value of k is :

(a) 7 (b) -7 (c) 2

5 MARKS QUESTIONS YEARS (2024)

1.Factorise $2y^3$+ y^2- 2y – 1

1 Marks questions(2025)

1.Which of the following is the degree of the polynomial $5x^3+ 4x^2+ 7x$?
(a) 2 (b) 0 (c) 1 (d) 3
2.x^2-y^2 = ...? (a) (x + y) (x – Y) (b) $x^2+ xy +y^2$ (c)) $x^2-xy +y^2$

3 MARKS QUESTIONS YEARS (2025)

1.Evaluate 99^3 using suitable identity .
2.Facrorise $4y^2$-4y + 1
3.Find the value of k , if .If x = 2, y = 1 is a solution of the equation 2x + 3y = k.
4.Expand $(2x – y + z)^2$ using suitable identity.
5.Find the product of (x + 4) (x + 10) using suitable identity.

CHAPTER-3 (COORDINATE GEOMETRY)

3 MARKS QUESTIONS YEARS (2020)

1.In which quadrant or on which axis do each points (-2,4), (3,-1), (-1,0), (1,2) and(-3,5)lie? Locate the points on Cartesian plane.

1 MARKS QUESTIONS YEARS (2024)

1.The points (2,3) lies in : (a) on the x-axis (b) on y- axis (c) in I quadrant
2.In Cartesian system, the y-coordinate is also called: (a) abscissa (b) ordinate (c) origin

1 MARKS QUESTIONS YEARS (2025)

1.Points situated in 3rd quadrant has co-ordinates of the type .....
(a) x- positive y-positive (b) x- negative y-positive (c)) x- positive y-negative
(d)) y- negative y-negative
2.Which of the lies in first quadrant ?(a) (-3,2) (b) (2,2) (c) (1,-4) (d) (-3,2)

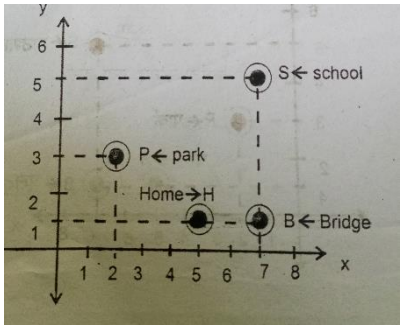
3 MARKS QUESTIONS YEARS (2024)

1.Plot the points (x ,y) given in the following table on the plane , choosing suitable units of distance on the axes.

X	-2	-1	1	3
Y	8	7	3	-1

4 MARKS QUESTIONS YEARS (2025)

1. Aryaman has to reach his school every day at 7:00 am. On the way to his school he crosses a bridge. Now the location of Aryaman's house, bridge, park and his school are represented by the figure below. Using the detail given, answer the following questions: (i) Write the coordinates of park (P) (ii) Write the aliscissa of Bridge (B) (iii) Write the ordinates of School (S) (iv) Write the coordinates of Home (H)



CHAPTER-4 (LINEAR EQUATIONS IN TWO VARIABLES)

1.Draw the graph of linear equation y= 3x in two variables.

1 MARKS QUESTIONS YEARS (2024)

1.The graph of x = a is a straight line parallel to the (a) x- axis (b) y- axis (c) none

1 MARKS QUESTIONS YEARS (2025)

1.Which of the following is a linear polynomial?
(a) x^2+ X (b) x - x^3 (c) 1 + x
2.Which of the following is correct for the given equation? Y=3x+5
(a) Has a unique solution b) Has only two solutions c) Has infinitely many solutions
d) has no solution

CHAPTER-5 (EUCLID'S GEOMETRY)

1 MARKS QUESTIONS YEARS (2024)

1.In Euclid's 2nd postulate a line segment is called- (a) a terminated line
(b) a non terminated line (c) none

CHAPTER-6 LINE'S AND ANGLES)

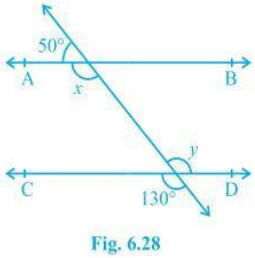


Fig. 6.28

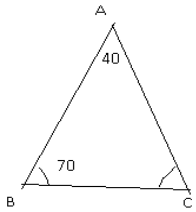
3 MARKS QUESTIONS YEARS (2020)

1.In Fig.6.28 find the values of x and y and then show that AB || CD.

1 MARKS QUESTIONS YEARS (2024)

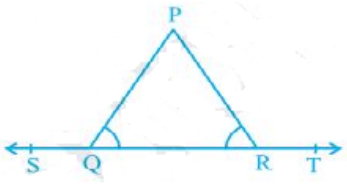
1.The complement of 65°is : (a) 65 ° (b) 180 ° (c) 25 °

2.In isosceles ΔABC, $\angle C = ?$



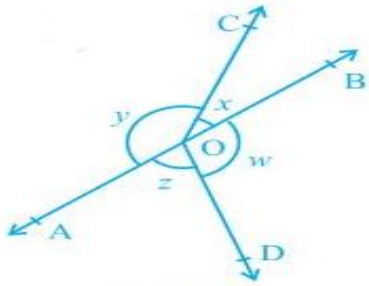
3-Marks questions (2025)

1.In Fig. ∠PQR = ∠PRQ, then prove that ∠PQS = ∠PRT.



3-Marks questions (2025)

2. In Fig. 6.16, if x+y = w+z, then prove that AOB is a line

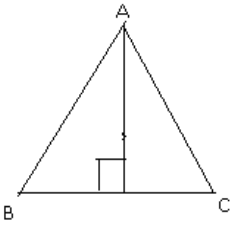


CHAPTER-7 (TRIANGLES)

2020

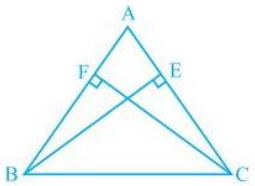
1.Find the area of an equilateral triangle having each side 4cm.

2024 1.InΔABC ,AD is the perpendicular bisector of BC (see fiq) show that ΔABC is an isosceles triangle in which AB = AC



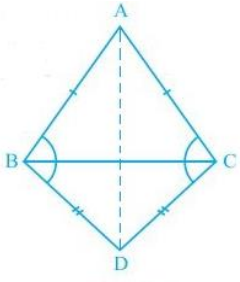
3- Marks questions (2025)

1.ABC is an isosceles triangle in which altitudes BE and CF are drawn to equal sides AC and AB, respectively (see Fig. 7.31). Show that these altitudes are equal.



2. ABC and DBC are two isosceles triangles on the same base BC (see Fig.). Show that

∠ABD = ∠ACD.



CHAPTER-8 (QUADRILATERAL)

1 MARKS QUESTIONS YEARS (2020)

1.In which quadrilateral both pair of adjacent sides are equal:

(a) Kite (b) trapezium (c) parallelogram (c) rectangle

2.In triangle the two angles are 25°and 45° respectively , the third angle is

(a) 120° (b) 110° (c) 130° (d) 290°

1 MARKS QUESTIONS YEARS (2024)

1.The angles of a quadrilateral are in the ratio 3: 5: 9: 13 , What is the measure of the smallest angle ?

(a) 12 ° (b)18 ° (c) 36 ° (d) 60°

1MARKS QUESTIONS YEARS (2025)

1.Which of the following is a pair of supplementary angles?

a) 30^0, 50^0 b) 130^0, 50^0 c) 120^0, 70^0 d) 100^0, 100^0

2. Which of the following is the measure of an angle in a semi-circle?

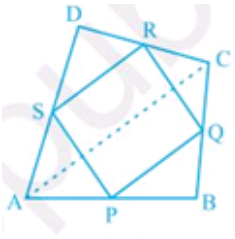
a) 180^0 b) 0^0 c) 90^0 d) 120^0

3 MARKS QUESTIONS YEARS (2020)

1.The sum of angles of a quadrilateral is 360°. If one of the angles of the quadrilateral is 60°and the remaining angles are equal , find each equal angle.

4 MARKS QUESTIONS YEARS (2024)

1.ABCD is a quadrilateral in which P, Q, R and S are mid-points of the sides AB, BC, CD and DA (see Fig 8.29). AC is a diagonal. Show that:



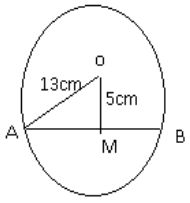
(i) SR || AC and SR = $\frac{1}{2}$ AC

(ii) PQ = SR

(iii) PQRS is a parallelogram.

5-marks questions (2025)

1.ABC is a triangle right angled at C. A line through the mid-point M of hypotenuse AB and parallel to BC intersects AC at D. Show that

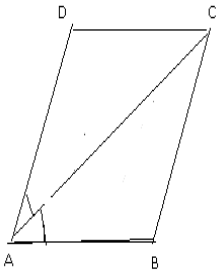


(i) D is the mid-point of AC

(ii) MD ⊥ AC

(iii) CM = MA = $\frac{1}{2}$AB

2.ABCD is a rectangle in which diagonal AC bisects ∠A as well as ∠C. Show that:



(i) ABCD is a square

(ii) Diagonal BD bisects ∠B as well as ∠D.

CHAPTER-9 (AREA OF PARALLELOGRAMS AND TRIANGLE)

1 Mark questions 2025

1. In a parallelogram, if measure of one angle is 720, then what will be the measure of it's opposite angle?

a) 108^0 b) 72^0 c) 18^0 d) 60^0

CHAPTER-10 (CIRCLES)

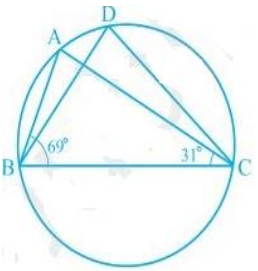
3 MARKS QUESTIONS YEARS (2020)

1.In figure, find the length of chord AB which is at a distance of 5cm from the centre of a circle of radius 13cm.

2.Prove that equal chords of a circle subtend equal angles at the centre .

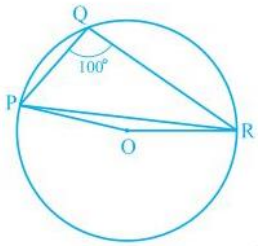
3-marks question 2024

1.In Fig. ∠ABC = 69°, ∠ACB = 31°, find ∠BDC.



3-Marks questions (2025)

2.In Fig. , ∠PQR = 100°, where P, Q and R are points on a circle with centre O. Find ∠OPR.



CHAPTER-11(HERON'S FORMULA)

5 MARKS QUESTIONS YEARS (2020)

1.An umbrella is made by stitching 10 triangular pieces of cloth of two different colors, each piece measuring 20 cm, 50 cm and 50 cm. How much cloth of each color is required for the umbrella?

5- marks question (2024)

1.An isosceles triangle has perimeter 30cm and each of the equal side 12cm . find the area of the triangle .

Fig. 12.16

5- marks question (2025)

1.Sides of a triangle are in the ratio of 12 : 17 : 25 and its perimeter is 540cm. Find its area

1.Marks question (2025)

1.What is S' in Heron's formula (a) perimeter (b) semi perimeter (c) Area

CHAPTER-12(SURFACE AREA AND VOLUMES)

1 MARK QUESTIONS YEARS (2020)

1 MARK QUESTIONS YEARS (2025)

1.What is the height of a right circular cone having slant height 13 cm and its radius 5 cm ?

(a) 8 cm (b) 18 cm (c) 12 cm (d) 7cm

1.If the radius of sphere is 'r' the volume of sphere is :

(a) $\frac{1}{3}\pi r^2$ (b) $\frac{4}{3}\pi r^3$ (c) $\frac{3}{4}\pi r^2$

3 MARKS QUESTIONS YEARS (2020)

1.Find the total surface area of a hemisphere with radius 21cm.

5 MARKS QUESTIONS YEARS (2020)

1.The length, breadth and height of a room are 5 m, 4 m and 3 m, respectively. Find the cost of whitewashing the walls of the room and ceiling at the rate of Rs 7.50 per m^2.

5 MARKS QUESTIONS YEARS (2024)

1.The height of cone is 15cm. if its volume is 1570cm^3, find the radius of the base. (use $\pi = 3.14$)

3 MARKS QUESTIONS YEARS (2025)

1.Diameter of the base of a cone 10.5 cm and its slant height is 10 cm. Find the curve surface area.

5 MARKS QUESTIONS YEARS (2025)

1.The diameter of moon is approximately one- fourth of the diameter of the earth . What fraction of the volume of the earth is the volume of moon ?

2.The volume of right circular cone is 9856 cm^3. If the diameter of base is 28 cm then find : (i) Height of cone (ii) Slant height of the cone (iii) Curved surface area of the cone.

3.A Mathematics teacher bring some clay in the class room to teach the topic "Surface area and Volume" He form a cone of radius 3 cm and height 4 cm with the clay. With the help of above information answer the following questions (Take $\pi = \frac{22}{7}$)

(i) What will be the slant height of cone .

(ii) write the formula calculating curved surface area of cone.

(iii) Calculate the curved surface area of cone .

(iv) Write the formula to calculate volume of cone.

CHAPTER-14 (STATISTICS)

1marks question 2024

1. Choose the lower limit of the class interval 80-90.

a) 90 b) 100 c) 0 d) 80

1marks question 2025

1.Total surface area of hemisphere = ……..

(a) $4\pi r^2$ b) $3\pi r^2$ c) $2\pi r^2$ d) $\frac{3}{4}\pi r^2$

5 marks question 2024

1.Given below are the seats won by different political parties in a polling out come of a state assembly election :

Political party	A	B	C	D	E	F
Seat won	77	55	37	29	10	37

(i)Draw bar graph to represent the political results.

(ii)Which political party won the maximum number of seats ?

5 marks question 2024

1.A random survey of the number of children of various age groups playing in a park was found as follows.

Age (in years)	1-2	2-3	3-5	5-7	7-10	10-15	15-17
Number of children	5	3	6	12	9	10	4

Draw a histogram to represent the data above.