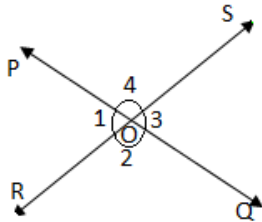
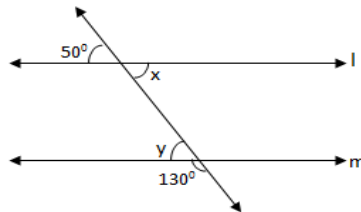
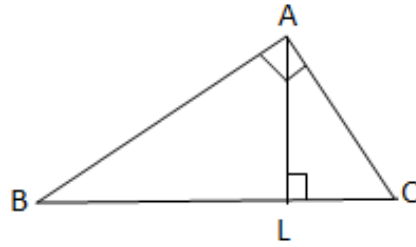




S.NO	MCQ (1 Mark Each)
1	Where does the point $(-2, 7)$ lie? a) 3 <sup>rd</sup> Quadrant    b) 4 <sup>th</sup> Quadrant    c) 2 <sup>nd</sup> Quadrant    d) 1 <sup>st</sup> Quadrant
2	The mirror image of the point $(-3, 5)$ with respect to y- axis is a) $(-3, 5)$ b) $(3, 5)$ c) $(3, -5)$ d) $(-3, -5)$
3	If $\triangle ABC \cong \triangle PSQ$ , then which of the following is true? a) $AB = SQ$ b) $PS = BC$ c) $AC = PQ$ d) $BC = PQ$
4	The equation of a line representing the x- axis is a) $x = 0$ b) $x = k$ c) $y = 0$ d) $y = k$
5	The degree of the polynomial $\sqrt{5}$ is a) 0    b) 1    c) not defined    d) $\frac{1}{2}$
6	If the sum of any 2 angles is $180^\circ$ , then the angles are a) Supplementary    b) complementary    c) Linear pair    d) Adjacent angles
7	$3.1011011101110\dots$ is a) Rational number    b) Integer    c) Natural number    d) Irrational number
8	Find the value of $\left[ (16)^{\frac{1}{2}} \right]^{\frac{1}{2}}$ . a) 16    b) 2    c) 4    d) 8
9	Measurement of a reflex angle is a) $90^\circ$ b) between $0^\circ$ and $90^\circ$ c) between $90^\circ$ and $180^\circ$ d) between $180^\circ$ and $360^\circ$
10	If $x + y + z = 0$ , then $x^3 + y^3 + z^3$ is a) $x^2 + y^2 + z^2$ b) 0    c) $3xyz$ d) $x^2 y^2 z^2$
11	If the sum of any 2 angles is $90^\circ$ , then the angles are a) Supplementary    b) complementary    c) Linear pair    d) Adjacent angles
12	Measurement of an obtuse angle is a) $90^\circ$ b) between $0^\circ$ and $90^\circ$ c) between $90^\circ$ and $180^\circ$ d) between $180^\circ$ and $360^\circ$
13	If the sum of any 2 adjacent angles is $180^\circ$ , then the angles are Vertically opposite $\angle^s$ b) complementary    c) Linear pair    d) Co-interior angles
<b>VSA –VERY SHORT ANSWER TYPE QUESTIONS(1 Mark Each)</b>	
14	What is the perpendicular distance of the point $(7, 6)$ from x- axis?
15	Write SSS congruence rule for two triangles.
16	What is the co-efficient of $(-3x^4 y)$ ?
17	A linear equation has solutions $(-5, 5)$ , $(0, 0)$ and $(5, -5)$ . Write the linear equation representing the given situation.
18	Find the remainder when $m^2 - m + 1$ is divided by $(m + 1)$ .
19	Write the decimal form of $\frac{49}{1000}$ .
20	Simplify $(3 + \sqrt{2}) \times (3 - \sqrt{2})$ .

21	Find the measure of an angle which is equal to its complement.
22	An exterior angle of a triangle is $100^\circ$ and 2 interior opposite angles are equal. What is the measure of each interior opposite angle?
23	In $\triangle ABC$ and $\triangle PQR$ , $AB = QR$ , $BC = RP$ , $\angle B = \angle R$ . Write the congruence of triangles in symbolic form. Also mention the congruence rule by which they are congruent.
24	Find the measure of an angle which is equal to its supplement.
25	What is the ordinate of the point (17, 10)?
26	Find the complement of $\frac{2}{3}$ of a right angle.
<b>SA – I SHORT ANSWER TYPE QUESTIONS (2Marks Each)</b>	
27	Without plotting the points on a Cartesian plane, find which of the following points lie on x- axis? (-2, 0), (0, 8), (3, 0), (0, -9), (-4, 0) and (4, 0)
28	Find the value of 'p' when the polynomial $(x^3 + 4x^2 - px + 8)$ is exactly divisible by $(x - 2)$ .
29	Without drawing the graph, find the point at which the equation $3x - 2y = 6$ meets the x- axis. OR Give the geometrical representation of $3y - 5 = y + 1$ as an equation in one variable
30	In the figure, lines PQ and RS intersect each other at point O. If $\angle 1 : \angle 2 = 5 : 7$ , find the measure of all the angles. 
31	ABC is an isosceles triangle with base BC. P is a point on BC such that $AP \perp BC$ . Show that $BP = CP$ . OR Show that in a right angled triangle, the hypotenuse is the longest side.
32	Represent $\sqrt{2}$ on the number line.
33	 In the figure, find x and y and then show that $l \parallel m$ .
34	Show that in a right angled triangle, the hypotenuse is the longest side.
<b>SA-II SHORT ANSWER TYPE QUESTIONS (3 Marks Each)</b>	
35	Polynomials $(3x^3 - 5x^2 + kx - 2)$ and $(-x^3 - x^2 + 7x + k)$ leave the same remainder when divided by $(x + 2)$ . Find the value of k. OR Using a suitable identity, find $(98)^3$
36	If the point (-1, -5) lies on the graph of the equation $7x = ky + 3$ , then find the value of k
37	Prove that each angle of an equilateral triangle is $60^\circ$ .
38	In the figure, $\triangle ABC$ is right angled at A. AL is drawn perpendicular to BC. Prove that $\angle BAL = \angle ACB$ .



39

Express 0.3282828..... in the form of  $\frac{p}{q}$  where 'p' and 'q' are integers and  $q \neq 0$ .

40

Find the value of  $\left(x - \frac{1}{x}\right)^2$ , if  $x = 1 + \sqrt{2}$ .

OR

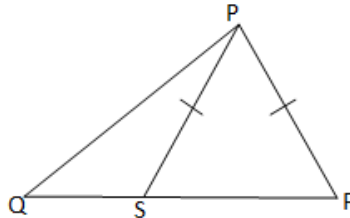
Represent  $\sqrt{6.5}$  on the number line.

41

If  $p(x) = x^3 + 3x^2 - 2x + 4$ , then find the value of  $p(2) - p(-1)$ .

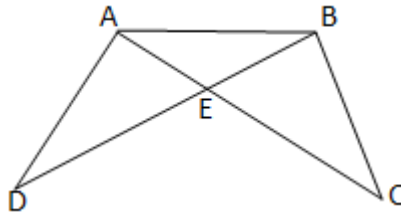
42

In the figure, S is a point on side QR of  $\triangle PQR$  such that  $PS = PR$ . Show that  $PQ > PS$ .



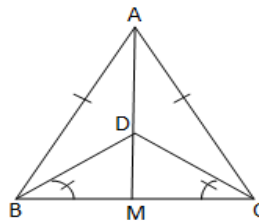
OR

In the figure,  $\angle EAB = \angle EBA$  and  $AC = BD$ . Prove that  $AD = BC$ .



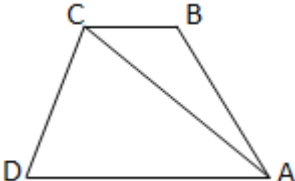
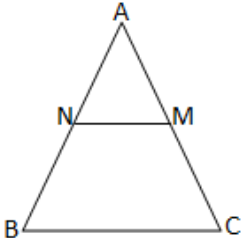
43

In the figure,  $AB = AC$ , D is the point in the interior of  $\triangle ABC$  such that  $\angle DBC = \angle DCB$ . Prove that AD bisects  $\angle BAC$  of  $\triangle ABC$ .



OR

In the figure, prove that

	 <p><math>CD + DA + AB + BC &gt; 2AC</math></p>
	<b>LA- LONG ANSWER TYPE QUESTIONS (4 Marks Each)</b>
44	Prove that sum of 3 angles of a triangle is $180^\circ$ and hence find the value of x if the angles of the triangle are $(2x - 7)^\circ$ , $(x + 25)^\circ$ and $(3x + 12)^\circ$ .
45	Factorize: $x^4 + 2x^3y - 2xy^3 - y^4$ OR Factorize: $x^3 - 3x^2 - 9x - 5$
46	In the figure, ABC is an isosceles triangle in which $AB = AC$ and NM is parallel to BC. If $\angle A = 50^\circ$ , find $\angle ANM$ & $\angle NMC$ . 
47	Draw the graph of $x + y = 5$ . From the graph, identify the point where the line cuts y-axis.
48	Find the value of p and q, if $\frac{7 + \sqrt{5}}{7 - \sqrt{5}} - \frac{7 - \sqrt{5}}{7 + \sqrt{5}} = p - 7\sqrt{5}q$ . OR Arrange in descending order: $\sqrt[3]{2}$ , $\sqrt[4]{5}$ , $\sqrt[6]{7}$ and $\sqrt[12]{3}$ .
49	Plot the points A (1, 4), B (6, 4), C (5, 1) and D (0, 1) on the graph paper. Join them in order. Identify the figure obtained and find the area of it.