

NORTH EX PUBLIC SCHOOL
(Senior Secondary, Affiliated To CBSE)
School Block , JAIN NAGAR, Sector-38, Rohini, Delhi-81
PERIODIC –II, 2019-20
SUBJECT-MATHEMATICS
CLASS- IX

Time-1hour 20 min

M.M -40

All the questions are compulsory.

SECTION A

(2X2=4)

1. A survey of 150 students was about the like of Mathematics conducted. Read the given table and find the probability that a student chosen at random
- (a) likes mathematics (b) does not like mathematic

opinion	No. of students
like	105
dislike	45

2. Construct the given angles by using protractor. (a) 130° (b) 80°

SECTION B

(4 x 3 =12)

3. Show that in a right angled triangle, the hypotenuse is the longest side.
4. The angles of a quadrilateral are in the ratio 2:5:8:15. Find all the angles of quadrilateral.
5. Show that the line segment joining the mid points of two sides of a triangle is parallel to the third side.

OR

If the diagonals of a parallelogram are equal , then show that it is a rectangle.

Outcome	1	2	3	4	5	6
frequency	18	20	25	10	15	12

6.

A die is thrown 100 times. Read the above table and find the probability of getting each outcome.

SECTION-C

(4X6=24)

7. ABC is a right angled triangle in which $A=90^{\circ}$ and $AB=AC$. Find B and C.
8. Construct the angles by using Compasses. (a) 150° (b) $22\frac{1}{2}^{\circ}$
9. Show that the diagonals of a quadrilateral bisect each other at right angles, then it is a rhombus.

OR

ABCD is a parallelogram and AP and CQ are perpendiculars from vertices A and C on diagonal BD. Show that
(a) $\angle APB = \angle CQD$ (b) $AP = CQ$

10. Construct a triangle ABC in which $BC=6\text{cm}$, $B=65^{\circ}$ and $AB+AC=11\text{ cm}$

OR

Construct a right triangle whose base is 10cm and sum of its hypotenuse and other side is 14cm

11. ABC is a triangle in which altitudes BE and CF to sides AC and AB are equal. Show that –
(a) $\angle ABE = \angle ACF$ (b) $AB=AC$, ABC is an isosceles triangle.

12. Three coins were tossed 50 times. Compute the probability of each outcome.

Outcome	3Heads	2 Heads	1Head	No Head
frequency	15	20	11	14