

# MATHEMATICS

## Class: IX

Time : 3 1/4 hrs

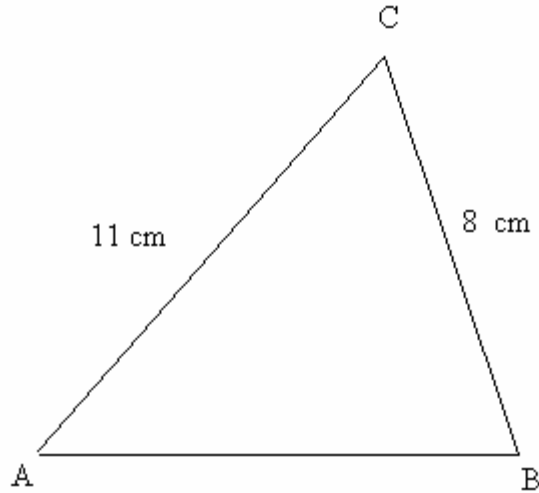
Marks :80

### General Instructions

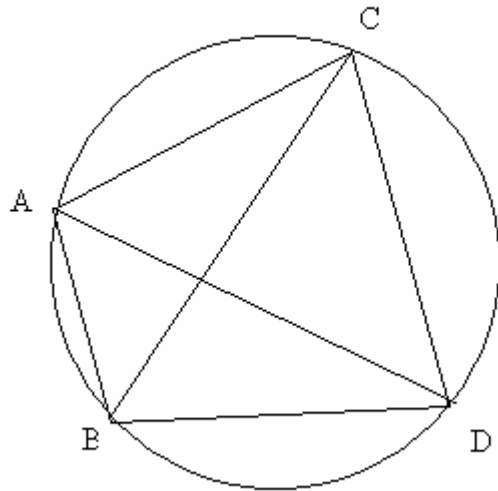
1. All questions are compulsory
2. The question paper consists of 25 questions divided in to three sections A, B and C .Section A contains 7 questions of 2 marks each .Section B is of 12 Questions of 3 marks each and section C of 6 Questions of 5 marks each
3. There is no overall choice .However ,internal choice has been provided in two questions of two marks each, two questions of three marks each, two questions of five marks each
4. In question on construction ,drawing should be neat exactly as per the given measurements.
5. Use of calculators is not permitted.

### SECTION A

1. Evaluate without direct multiplying  
 $106 \times 99$
2. rationalize the denominator  
 $\frac{7\sqrt{5}}{5\sqrt{8}}$
3. Plot the point on the coordinate plane if the abscissa of the point is -4 and the ordinate is 8.
4. Find the area of a triangle, two sides of which are 8cm, 11 cm and the perimeter is 32 cm.



5. p 9.6 on number line. Represent
6. Two coins are tossed simultaneously. What is probability of getting heads on both coins?
7. ABCD is a cyclic quadrilateral in which AC and BD are diagonals. If  $\angle DBC = 55^\circ$  And  $\angle BAC = 45^\circ$ . Find  $\angle BCD$



8. Construct a triangle ABC, in which  $\angle A = 30^\circ$ ,  $\angle B = 90^\circ$  and  $AB+BC+AC=13$  cm.

9. The angles of quadrilateral are in the ratio off 3: 5: 9: 13. Find all the angles of the quadrilateral.
10. a field is in the shape of trapezium whose parallel sides are 25 m and 10 m . the non parallel sides are 14 m and 13 m . Find the area of field.
11. The mean of the numbers 1, 7, 5, 3, 4, 4 is m. The numbers 3, 2, 4, 2, 3, 3, p. have mean -1 and median q. Find
- p
  - q
  - the mean of p and q.
12. Solve the equation  $4x-2=x+4$  , and represent the solution on the Cartesian plane.
13. If a point C lies between two points A and B such that  $AC=BC$ , then prove that  $AC = \frac{1}{2} AB$  . Explain by drawing the figure.
14. AD and BC are equal [perpendiculars to a line segment AB. Show that CD bisects AB.