

Mathematics

Full Syllabus Test

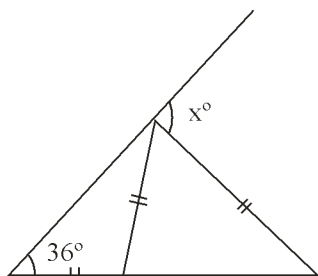
VIII (ICSE)

Full Marks : 80

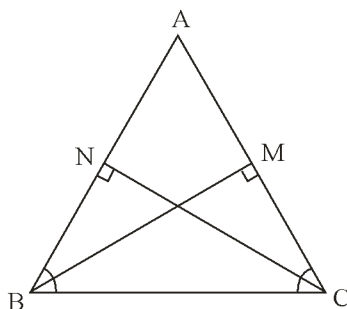
Time : 2 hr. 30 min

SECTION – A (Compulsory)

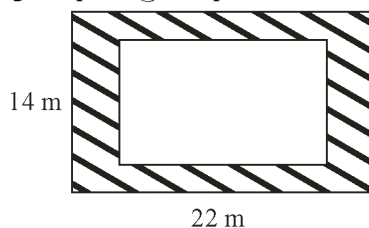
1. (a) Multiply $(5x^2 - 8y)(9x + 4y^2)$ 3
 (b) Find the value of x . 3



- (c) Two parallel sides of a trapezium are in the ratio 7 : 11 and the distance between them is 17 cm. If the area of the trapezium is 306 cm^2 . Find the length of its parallel sides. 4
2. (a) On increase the price of an article by 16%, it becomes Rs. 1479. What was its original price. 3
 (b) Simplify: $\frac{x^{2n+3} \cdot (x^2)^{n-1}}{x^{3n-5}}$ 3
 (c) In the figure given $AB = AC$, Prove that $BM = CN$ 4



3. (a) In the adjoining figure, find the area of the path which is of uniform width 1.9m inside the rectangle. Hence, find the cost of fencing the path @ ₹50 per metre. 4



- (b) Solve: $\frac{4}{x-3} + \frac{2}{x-2} = \frac{6}{x}$ 3
- (c) The marked price of a washing machine is Rs. 24800. A shopkeeper allows two successive discount of 15% and 5%. Find the price which a customer has to pay for the washing machine. 3
4. (a) The following table shows the daily pocket money of 44 students of class VIII of a school. 4

Pocket Money	3	5	8	10	15	17
No. of students	4	7	10	12	8	3

Find the mean. Represent the given data on a paper by a column graph.

- (b) The area of a circular ring enclosed between two concentric circle is 286 cm^2 . Find the radii of the two circles. Given that their difference is 7 cm. 3
- (c) A, B and C working separately can do a work in 2, 3, and 4 days. If they all work together and earn Rs. 3900 for the whole work, how should they divide the money? 3

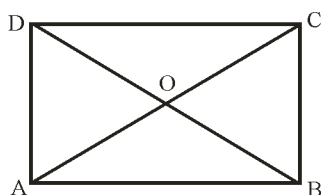
SECTION – B

(Answer any four)

5. (a) A cuboidal block of metal has dimension 36 cm by 32 cm by 0.25m. It is melted and recast into cubes with an edge of 4 cm. How many cubes can be made. 3
- (b) What number should be added to each of the number 3, 5, 13 and 19 so that the resulting number may be in proportion. 3
- (c) Construct a quadrilateral ABCD whose side $AB = 8 \text{ cm}$, $BC = 7 \text{ cm}$, $CD = 9.5 \text{ cm}$, $DA = 6 \text{ cm}$ and angle $\angle A$ is 75° 4
6. (a) Draw a histogram to represent the following data 4

Class interval	10-20	20-30	30-40	40-50	50-60
Frequency	3	5	10	8	2

- (b) A dealer buys a bicycle for Rs. 1250 and marks it at 40% above its cost price. If he allows 8% discount, find (i) MP; (ii) his profit percentage 3
- (c) In the adjoining figure, ABCD is a rectangle and diagonal intersect at O. If $\angle AOB = 118^\circ$, find (i) $\angle ABO$, (ii) $\angle ADO$, (iii) $\angle DCB$ 3

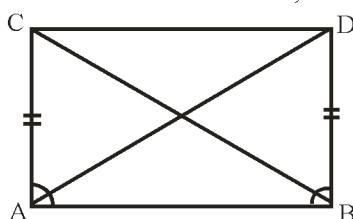


7. (a) Find the simple interest on Rs. 15840 at $6\frac{2}{3}\%$ per annum from 18th Oct 2011 to 12th March 2012. Also find the amount. 3
- (b) A man is five times as old as his son. In two years, time he will be four times as old as his son. Find their present ages. 4
- (c) The mean of 8 numbers is 35. If a number is excluded then the mean is reduced by 3. Find the excluded number. 3

8. (a) Simplify: $\frac{7^{2n+3} - (49)^{n+2}}{[(343)^{n+1}]^{2/3}}$ 3

- (b) Find the median of the data. Hence, find the mean and the mode.
17, 15, 6, 16, 8, 22, 21, 9, 18, 25, 16, 19 4
- (c) Factorise: $7 + 10(x + y) - 8(x + y)^2$. 3

9. (a) In the adjoining figure, $AC = BD$. If $\angle CAB = \angle DBA$, show that $\angle ACB = \angle ADB$. 3



- (b) In how many years will Rs. 4000 amount to Rs. 5324 at 10% compound interest? 3
 (c) The number of cars coming of the assembly line per day is recorded for thirty days. The results are given below. 4

15 26 34 53 9 51 21 43 58 48 36 29 41 64 30 49 39 7 38 19 35 10 20 27
 32 63 15 60 63 8

Make a grouped frequency with class interval 0 – 9, 10 – 19, 20 – 29 etc. Represent this data on a bar graph

10. (a) In an isosceles triangle, a base angle is four times its vertical angle. Find all the angles of the triangle. 3
 (b) Divide: $m^3 - 6m^2 + 7$ by $m - 1$. 4
 (c) Two equal sides of an isosceles triangle are $(3x - 1)$ and $(2x + 2)$. The third side is $2x$ units. Find the value of x and the perimeter of the triangle. 3
11. (a) Divide Rs. 2324 among three children in the ratio $1\frac{1}{4} : 1\frac{1}{3} : \frac{7}{8}$. 4
 (b) Solve $\frac{3}{2x-1} + \frac{4}{2x+1} = \frac{7}{2x}$. 3
 (c) In the figure given, equilateral triangle EBC surmounts square ABCD. Find $\angle BED$ represented by x . 3

