

Class 9 ICSE Maths Sample Paper

General instruction:

- (A) This paper has two sections containing 40 marks each.
- (B) Exam duration is of two and a half hour.
- (C) Section- A contain questions from 1-4.
- (D) Section- B contain questions from 5-11.
- (E) Marks are allotted to each question for your convenience.
- (F) All questions are compulsory.

SECTION-A (40 marks)

Question- 1

- (a) Insert one rational number between $\frac{5}{7}$ and $\frac{4}{9}$ and arrange them in descending order.
- (b) Three cubes each of side 6 cm are joined together side-by-side to form a cuboid. Find the volume and the surface area of the cuboid.
- (c) Find the slope and y-intercept of the line $3x - 4y + 2 = 0$

Question- 2

- (a) A watch is sold for Rs.405 at a loss of 10%. Find the cost price of the watch.
- (b) Factorize: $8x^3 + y^3$.
- (c) $v = u + at$. Make 'a' as a subject and write the formula.

Question- 3

- (a) Solve: $x/2 = 3 + x/3$.
- (b) Solve the simultaneous linear equation: $3/x + 4y = 7$ $5/x + 6y = 13$
- (c) Round the number correct to 4 significant figures: 546.86.

Question- 4

- (a) Express as decimal: 35%.
- (b) Construct a quadrilateral with ,X and Y are mid-points of AB and AC respectively. If BC = 6 cm, AB = 5.4 cm and AC = 5 cm, calculate the perimeter of trapezium XYCB.
- (c) Find the number of sides of a regular polygon if each of its interior angles is 108° .

SECTION-B (40 marks)

Question- 5

- (a) Calculate the area of a triangle whose sides are 13 cm, 5 cm and 12 cm.
- (b) The volume of a rectangular solid is 3600 cm^3 . If it is 20 cm long and 9 cm high, find its total surface area.
- (c) If $5 \tan \theta = 4$, find the value of $(5 \sin \theta - 3 \cos \theta)/(5 \sin \theta + 2 \cos \theta)$

Question- 6

- (a) Prove that v^2 is an irrational number. Hence show that $3 - v^2$ is an irrational number.
- (b) Three candidates in a school election got 108, 132 and 260 votes each. What percentage of the votes did the winner receive?
- (c) A trader buys goods at 19% off the list price. He wants to get a profit of 20% after allowing a discount of 10%. At what percent above the list price should he mark the goods?

Question- 7

- (a) Two equal sums of money were lent at 10% and 13% p.a. on simple interest. At the end of 3 years the total interest received is Rs6900. Find the total sum lent.
- (b) If $(x + 1/x)^2 = 3$, find the value of $x^3 + 1/x^3$.
- (c) Factorize: $x^2 + 1/x^2 - 11$.

Question- 8

- (a) If $A = P(1 + r*t/100)$, find t. If $A = 460$, $P = 400$ and $r = 5$, find t.
- (b) If $x = p + 1$, find the value of p from the equation: $1/2(5x - 30) - 1/3(1 + 7p) = 1/4$.
- (c) Solve the following simultaneous equation graphically : $4x - y = 5$, $5y - 4x = 7$.

Question- 9

- (a) A fair dice is rolled. Find the probability of getting
- 4 on the face of the dice
 - An even number on the face of the dice
 - A number less than 7 on the face of the dice.
- (b) Six years hence a man's age will be three times his son's age, and three years ago he was nine times as old as his son. Find their present ages.
- (c) Three vertices of a triangle ABC are A (4,2), B(6,8) and C (8,4). Write down the equation of the median of the triangle through vertex B.

Question- 10

- (a) The manufacturer sold a bag to a shopkeeper for Rs.5400. The shopkeeper sold it to a trader at a profit of Rs.3000. If the trader sold it to the consumer at a profit of Rs.3400, find:
- The total VAT (value added tax) collected by the state government at the rate of 20%.
 - The interest that the consumer have to pays for the bag.
- (b) Construct a triangle DCE, given that $DC = 3$ cm, $CE = 5$ cm and median $CF = 6$ cm. Construct an in-circle to triangle DCE and measure its diameter.
- (c) Rama wishes to start a 400m^2 rectangular fruit garden. Since she has only 30 m barbed wire, she fences three sides of the garden letting his house front wall which act as the fourth side of the fence. Find the dimensions of the rectangular garden.

Question- 11

- (a) An number is selected at random from 50 to 100. Find the probability that the number is:
- Divisible by 10.

(ii) A perfect square.

(iii) A even number.

(b) Solve the given quadratic equation for the value of x and give your answer up to three correct to significant digits

(c) The given table has information about the distribution of the heights of a group of teachers

Height	130- 140	140- 150	150- 160	160- 170	170- 180	180- 190	190- 100
No. of Teachers	4	12	45	26	27	12	8

Use a graph draw an Ogive distribution and find

(i) The inter quartile range

(ii) The no. of teachers whose height are more than 158 cm

(iii) The no. of teachers whose height are less than 148 cm.

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