Mathematics

Sample Question Paper – 1

Class 7 (Ganita Prakash Part - I)

Time Allowed: 2 Hours 30 Minutes **Maximum Marks**: 60

GENERAL INSTRUCTIONS

1. This question paper has 16 questions. All questions are compulsory.
2. The question paper is divided into FIVE sections - Section A, B, C, D and E.
3. In Section A, Question 1 contains twelve Multiple Choice Questions (MCQs) of 1 mark each.
4. In Section B, Questions 2 to 7 are Very Short Answer (VSA) type questions of 2 marks each.
5. In Section C, Questions 8 to 10 are Short Answer (SA) type questions carrying 3 marks each.
6. In Section D, Questions 11 to 13 are Long Answer (LA) type questions carrying 5 marks each.
7. In Section E, Questions 14 to 16 are source-based/case-study questions carrying 4 marks each.
8. There is no overall choice. Internal choice is provided in one question in Section B, one question in Section C, two questions in Section D, and in the 2-mark part of each question in Section E.
9. Draw neat figures wherever required. Use ruler, compass and set-square wherever appropriate.
10. Use of calculator is not allowed.

SECTION – A

(Multiple-Choice Questions - 1 mark each. Choose the correct option.) (12 × 1 = 12)

1 (i) Which of the following is equal to one crore?

(a) 1,00,000
(b) 10,00,000
(c) 1,00,00,000
(d) 10,00,00,000

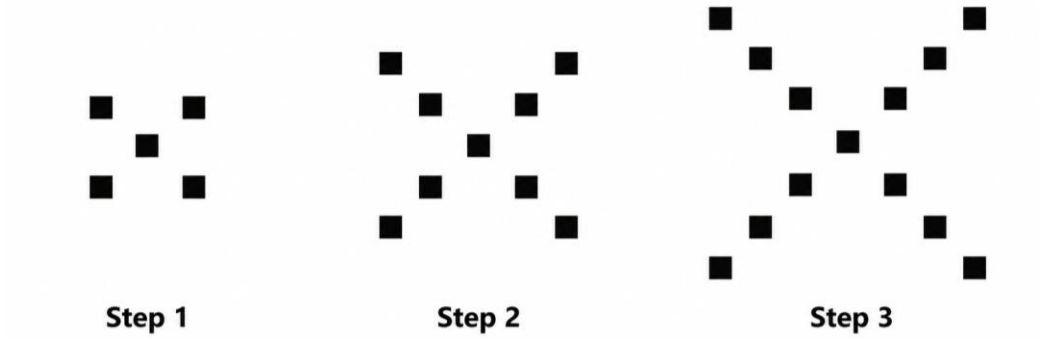
1 (ii) The value of 48 - 6 × 5 is:

(a) 18
(b) 210
(c) 42
(d) 24

1 (iii) How many hundredths make 1 unit?

(a) 10
(b) 100
(c) 1000
(d) 1

1 (iv) Observe the growing pattern. How many small squares will be present in Step 4?



(a) 15
(b) 16
(c) 17
(d) 18

1 (v) Two lines that intersect to form four right angles are called:

(a) parallel lines
(b) perpendicular lines
(c) curved lines
(d) transversals

1 (vi) The next term of the Virahāṅka sequence 1, 2, 3, 5, 8, 13, 21, 34, 55, ... is:

(a) 76 (b) 81

(c) 89 (d) 90

1 (vii) The sum of the three interior angles of a triangle is:

(a) 90° (b) 180°

(c) 270° (d) 360°

1 (viii) The value of 5/6 ÷ 10/12 is:

(a) 1/2 (b) 1

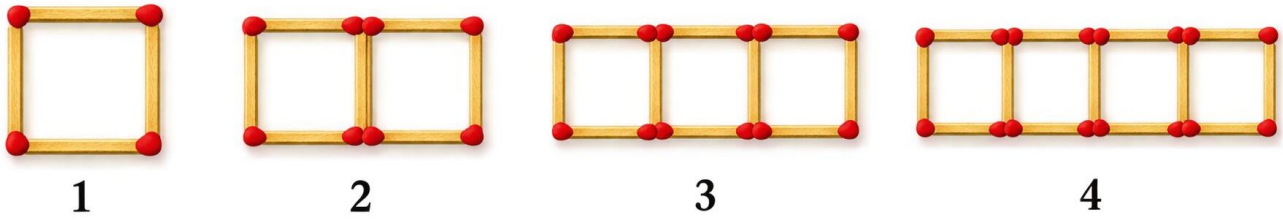
(c) 2 (d) 5/12

1 (ix) 8 units and 7 hundredths written as a decimal is:

(a) 8.7 (b) 8.07

(c) 80.7 (d) 8.007

1 (x) The figures show a row of matchstick squares. How many matchsticks are needed for Step 5?



(a) 14 (b) 15

(c) 16 (d) 20

1 (xi) 1 kilogram is equal to:

(a) 10 g (b) 100 g

(c) 1000 g (d) 10,000 g

1 (xii) Internet time costs ₹12 per hour. What is the cost of 1¼ hours?

(a) ₹12 (b) ₹14

(c) ₹15 (d) ₹16

SECTION - B

Questions 2 to 7 are Very Short Answer Type Questions of 2 marks each. (6 × 2 = 12)

2. Add brackets at appropriate places so that each statement becomes true:

(a) 45 - 12 + 8 = 25 (b) 64 - 16 - 6 = 54

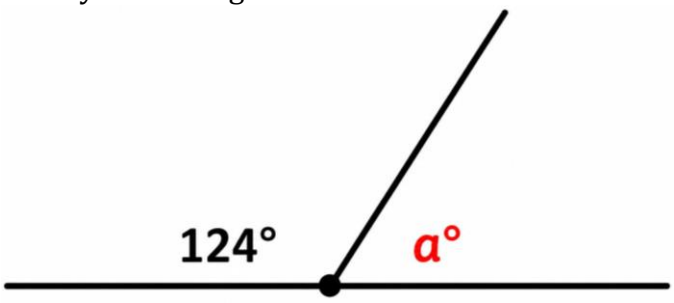
3. (a) A ribbon is 2 8/10 m long and another ribbon is 3 7/10 m long. Find their total length.

OR

3. (b) A pencil is 5 4/10 cm longer than a crayon of length 2 9/10 cm. Find the difference in their lengths.

4. One notebook costs ₹35 and one geometry box costs ₹80. If n notebooks and g geometry boxes are sold, write an algebraic expression for the total amount received.

5. Find the angle represented by a in the figure below.



6. From the following, write all decimal numbers that have the same value as 6.5:
6.05, 6.50, 6.500, 06.5, 6.005, 6.050

7. Find the third angle of a triangle when the other two angles are:
(a) 48° and 67° (b) 125° and 25°

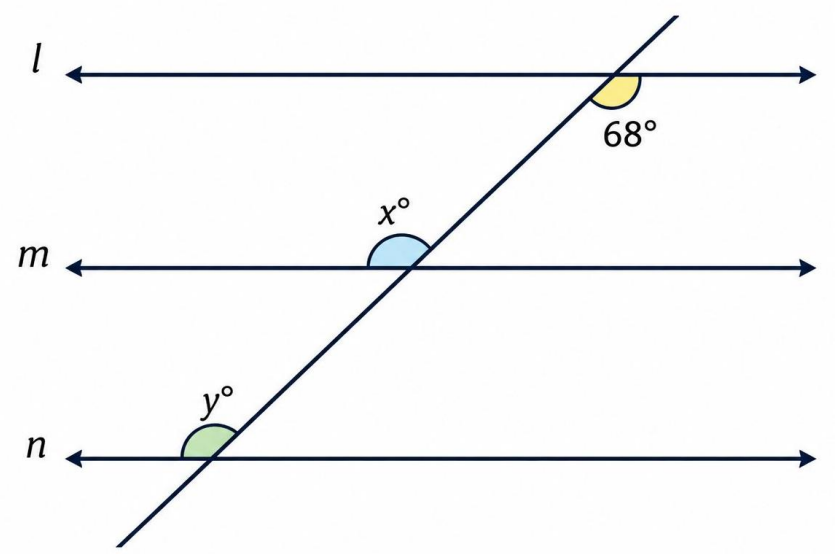
SECTION - C

Questions 8 to 10 are Short Answer Type Questions of 3 marks each. (3 × 3 = 9)

8. Compare each pair using <, > or =. Use reasoning rather than full calculation wherever possible.
(a) 72 × 31 - 9 ___ 72 × 30 - 9
(b) 25 × (18 + 12) ___ 25 × (17 + 13)
(c) (63 - 27) × 15 ___ 63 × 15 - 27 × 15

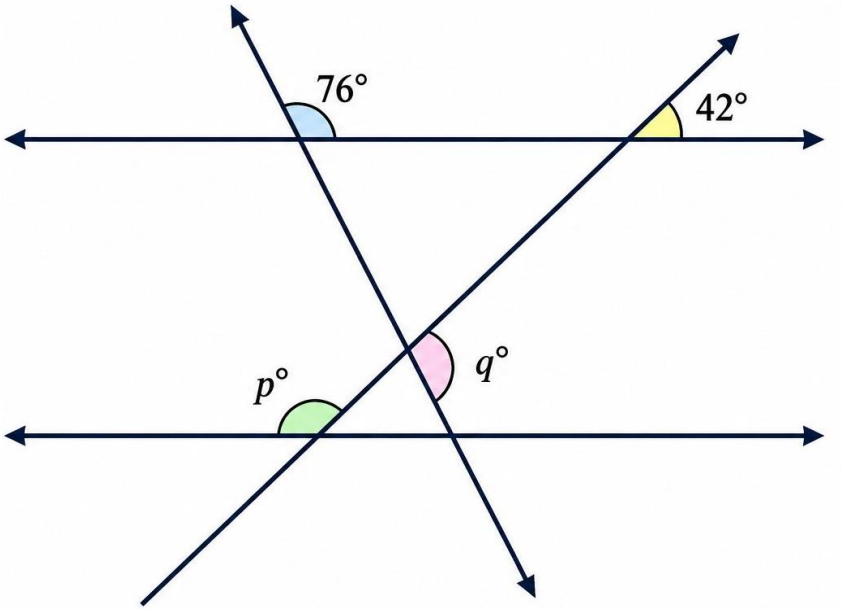
9. A fruit seller sold 2.75 kg apples, 1.8 kg oranges, 0.65 kg grapes and 3.05 kg guavas. Find the total mass of fruits sold.

10. (a) In the figure, l, m and n are parallel lines cut by a transversal. One angle is 68°. Find x and y, giving reasons.



OR

10. (b) In the figure, the two horizontal lines are parallel. Using the given angles 42° and 76°, find p and q, giving reasons.



SECTION – D

Questions 11 to 13 are Long Answer Type Questions of 5 marks each. (3 × 5 = 15)

11. (a) A school building is 36 m high. A hill viewpoint is 4,500 m above the surrounding plain and an aeroplane is flying at 10,800 m.

(i) How many times as high as the school building is the hill viewpoint? [2]
(ii) How many times as high as the school building is the aeroplane? [2]
(iii) A tower is 180 m high. How many times the school building height is this? [1]

OR

11. (b) A 2 m tall doorway is used as a familiar reference. A monument is 182 m high, a mountain camp is at 3,640 m and a helicopter flies at 1,200 m.

(i) How many times the doorway height is the monument? [2]
(ii) How many times the doorway height is the mountain camp altitude? [2]
(iii) How many times the doorway height is the helicopter altitude? [1]

12. Two consecutive terms in the Virahāṅka sequence are 233 and 377. Find the next three terms and the previous two terms. Show the pattern used.

13. (a) Construct triangle ABC with AB = 6 cm, BC = 7 cm and CA = 5 cm. Then construct the altitude from A to BC. Write the construction steps clearly.

OR

13. (b) Construct triangle PQR with PQ = 6 cm, PR = 5 cm and ∠QPR = 60°. Construct the altitude from R to PQ. Write the construction steps clearly.

SECTION - E

Questions 14 to 16 are Source-Based / Case-Study Questions of 4 marks each. (3 × 4 = 12)

14. **School Robotics Store**

A school robotics club purchases small components. The quantities and costs are shown below. Use the information to answer the questions.

Component	Quantity	Cost per unit
Mini nuts	100 pieces	35 paise
Copper wire	8 pieces	₹6.25
Sensor modules	6 pieces	₹145.50

(i) Find the total cost of 100 mini nuts in rupees. [1]

(ii) If each copper wire is 15.5 cm long, find the total length of 8 wires in centimetres. [1]

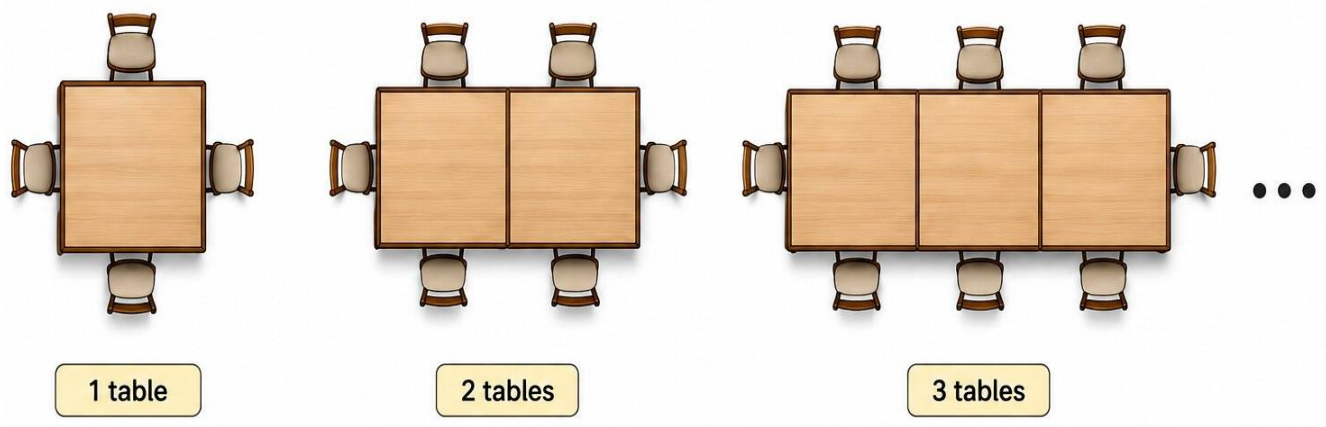
(iii) (a) Find the total amount paid for 6 sensor modules. [2]

OR

(iii) (b) The club had ₹1,000 for sensor modules. How much money remains after buying 6 modules? [2]

15. **Tables for a Mathematics Exhibition**

Square tables are joined end-to-end in one straight row. One table allows 4 chairs. Two joined tables allow 6 chairs, and three joined tables allow 8 chairs. Each additional table increases the number of chairs by 2.



(i) If t is the number of joined tables, write an expression for the number of chairs. [1]

(ii) How many chairs are needed for a row of 18 tables? [1]

(iii) (a) If 50 chairs are available, how many tables can be joined so that all 50 chairs are used? [2]

OR

(iii) (b) Two rows contain 9 tables and 14 tables respectively. Find the total number of chairs required for both rows. [2]

16. **Community Garden Project**

A rectangular community garden has a total area of 250 m^2. Volunteers planted 3/5 of the garden on the first day. They also have 36 litres of liquid manure. Each sapling requires 3/4 litre of manure.

(i) How many saplings can be treated with 36 litres of manure? [1]

(ii) What area of the garden was planted on the first day? [1]

(iii) (a) The unplanted part is shared equally among 4 student groups. What fraction of the whole garden does each group receive? [2]

OR

(iii) (b) The unplanted part is shared equally among 5 student groups. What fraction of the whole garden does each group receive? [2]