

Mathematics
Sample Question Paper – 2
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 sub-question of each case study 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

(Question 1 consists of Multiple-Choice Questions (i-xii) of 1 mark each.)

(12 × 1 = 12)

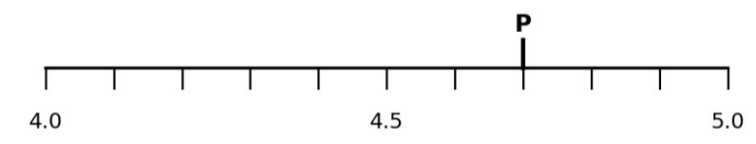
1 (i) Which number is written as 7,00,00,000 in the Indian place value system?

- (a) Seven lakh (b) Seven crore
(c) Seventy crore (d) Seven million

1 (ii) Which expression has the greatest value?

- (a) $18 + 4 \times 5$ (b) $(18 + 4) \times 5$
(c) $18 + (4 + 5)$ (d) $18 \times 4 - 5$

1 (iii) Point P is marked on the number line below. Which decimal does P represent?



- (a) 4.2 (b) 4.5
(c) 4.7 (d) 4.9

1 (iv) If one pencil costs ₹p and one eraser costs ₹e, the cost of 4 pencils and 3 erasers is:

- (a) 7pe (b) $4p + 3e$
(c) $3p + 4e$ (d) 12pe

1 (v) When a transversal cuts two parallel lines, a pair of corresponding angles are:

- (a) always equal (b) always 90°
(c) supplementary only (d) never equal

1 (vi) Observe the number grid. What is the parity of the sum of all six numbers?

2	5	8	Row A
7	4	9	Row B

- (a) Odd (b) Even
(c) Cannot be decided (d) Prime

1 (vii) Which set of lengths can form a triangle?

(a) 2 cm, 3 cm, 6 cm

(b) 4 cm, 5 cm, 8 cm

(c) 1 cm, 2 cm, 4 cm

(d) 3 cm, 3 cm, 7 cm

1 (viii) The value of $7/9 \times 3/14$ is:

(a) $1/6$

(b) $1/3$

(c) $3/7$

(d) $7/6$

1 (ix) Which is the greatest decimal number?

(a) 5.408

(b) 5.48

(c) 5.084

(d) 5.4080

1 (x) The next term in the Virahāṅka sequence 2, 3, 5, 8, 13, 21, ... is:

(a) 29

(b) 31

(c) 34

(d) 42

1 (xi) 2.35 kg is equal to:

(a) 235 g

(b) 2,350 g

(c) 23,500 g

(d) 235,000 g

1 (xii) A machine uses $3/5$ litre of oil per hour. How much oil will it use in 4 hours?

(a) $3/20$ L

(b) $7/5$ L

(c) $12/5$ L

(d) $4/5$ L

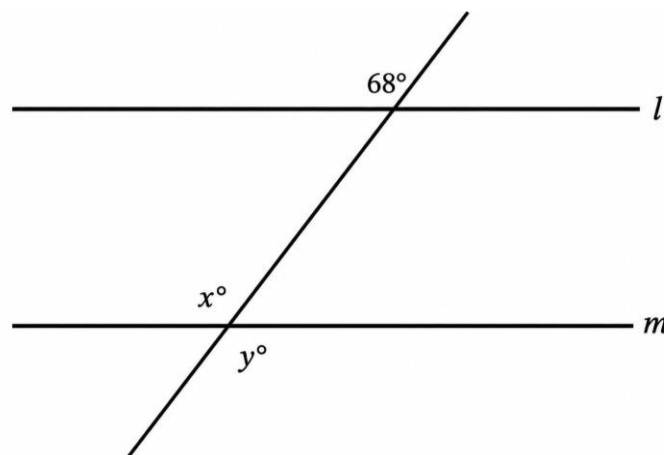
SECTION - B

(Questions 2 to 7 are Very Short Answer Type Questions of 2 marks each.)

(6 × 2 = 12)

2. Round 6,47,82,319 to the nearest lakh and to the nearest crore.

3. In the figure, l and m are parallel lines cut by a transversal. Find x and y .



4. The cost of one school bag is ₹ b and one water bottle is ₹ w . Write an expression for the cost of 3 bags and 5 bottles. Also find its value for $b = 450$ and $w = 80$.

5. Which of these decimals are equal? 3.6, 3.60, 3.060, 03.600, 3.006, 3.6000

6. Without adding the numbers completely, state whether each sum is odd or even and give a reason: (a) $27 + 46 + 81$ (b) $18 + 32 + 75 + 91$

7. (a) A water tank contains $8\frac{1}{2}$ litres of water. $2\frac{3}{4}$ litres are used. How much water is left?

OR

7. (b) A runner completed 3.75 km in the morning and 2.85 km in the evening. Find the total distance covered.

SECTION – C

Questions 8 to 10 are Short Answer Type Questions of 3 marks each.

(3 × 3 = 9)

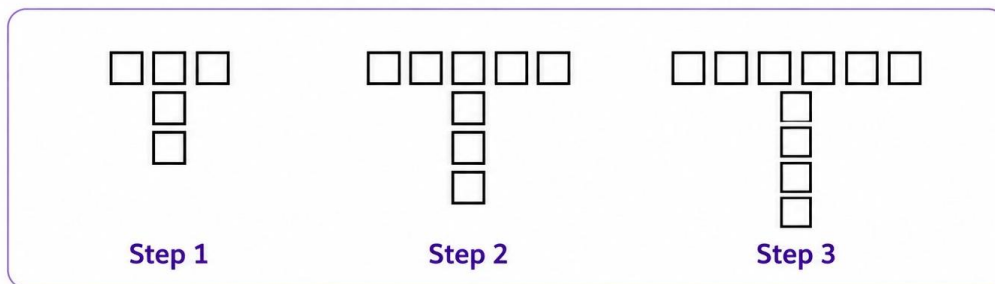
8. Compare each pair using $<$, $>$ or $=$. Explain briefly without unnecessary full calculation.

(a) $37 \times (25 + 5)$ □ $37 \times 25 + 37 \times 5$

(b) $96 - (18 + 7)$ □ $96 - 18 + 7$

(c) $25 \times 48 - 25 \times 8$ □ 25×40

9. Observe the growing tile pattern shown below. Count the tiles in Steps 1, 2 and 3. Predict the number of tiles in Step 6 and write a letter-number expression for the number of tiles in Step n .



10. (a) Three angles of a triangle are represented by x° , $(x + 20)^\circ$ and $(x + 40)^\circ$. Find x and all three angles.

OR

10. (b) A shopkeeper had 12.5 kg rice. She sold 3.75 kg in the morning and 4.8 kg in the evening. How much rice remained? Show the decimal calculation clearly.

SECTION – D

Questions 11 to 13 are Long Answer Type Questions of 5 marks each.

(3 × 5 = 15)

11. (a) A town had a population of 28,75,430 in 2011 and 34,92,780 in 2021.

(i) Find the increase in population.

[2]

(ii) Round both populations to the nearest lakh.

[2]

(iii) Using the rounded values, estimate the increase.

[1]

OR

11. (b) A stadium has 1,18,500 seats. Over three events, 96,750, 1,05,200 and 1,11,900 people attended.

(i) Find the total attendance.

[2]

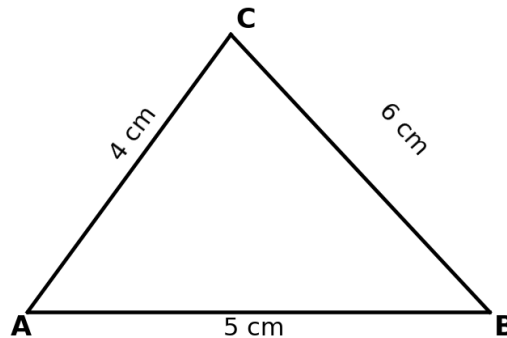
(ii) Round each attendance to the nearest ten thousand and estimate the total.

[2]

(iii) Which is larger: exact total or estimated total?

[1]

12. The sketch below shows the side lengths for triangle ABC. Construct the triangle accurately using ruler and compass. Then construct the altitude from C to AB and write the main construction steps. [5]



13. (a) A recipe requires $\frac{3}{4}$ cup of flour for one batch of biscuits.

(i) How much flour is needed for 6 batches? [2]

(ii) If 9 cups of flour are available, how many complete batches can be made? [2]

(iii) How much flour will remain? [1]

OR

13. (b) A cyclist covers $\frac{5}{6}$ km in 1 minute at a steady rate.

(i) How far does she cover in 9 minutes? [2]

(ii) How many minutes are needed to cover 15 km? [2]

(iii) Is $\frac{5}{6}$ less than or greater than 1? How does that affect the distance covered in one minute? [1]

SECTION - E

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

(3 × 4 = 12)

14. Tiwari Academy Health Fair



At tiwari academy health fair, a juice cup costs ₹18.50, a fruit bowl costs ₹32.75 and a healthy snack costs ₹24.25. A class buys 10 juice cups, 6 fruit bowls and 8 healthy snacks.

(i) Find the cost of 10 juice cups. [1]

(ii) Find the cost of 6 fruit bowls. [1]

(iii) (a) Find the total cost of all three types of items. [2]

OR

(iii) (b) The class has ₹600. How much money will remain after buying only the 10 juice cups and 8 healthy snacks? [2]

15. Number-Play Challenge

A teacher writes the Virahāṅka sequence 1, 2, 3, 5, 8, 13, 21, ... and discusses parity. She also reminds students that each new term is obtained by adding the previous two terms.

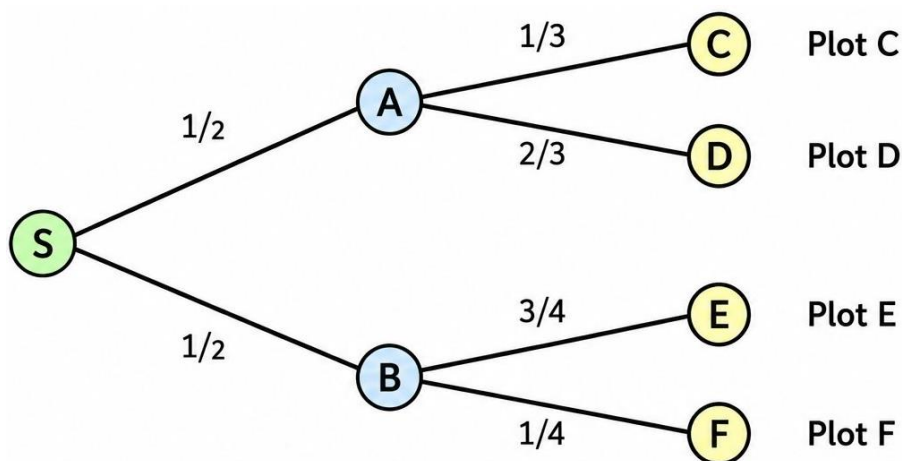
- (i) Write the next term after 21. [1]
- (ii) State whether the next two terms after 21 are odd or even. [1]
- (iii) (a) Starting with 13 and 21, write the next four terms. [2]

OR

- (iii) (b) If two consecutive terms are 144 and 233, find the previous two terms. [2]

16. Dividing a Community Garden

A community garden is first divided equally into two main plots A and B. Plot A is then divided so that $\frac{1}{3}$ goes to Plot C and $\frac{2}{3}$ to Plot D. Plot B is divided so that $\frac{3}{4}$ goes to Plot E and $\frac{1}{4}$ to Plot F. The fractions shown are fractions of their immediate parent plot.



- (i) What fraction of the whole garden is Plot C? [1]
- (ii) What fraction of the whole garden is Plot F? [1]
- (iii) (a) Find the fraction of the whole garden covered by Plots C and F together. [2]

OR

- (iii) (b) Find the fraction of the whole garden covered by Plots D and E together. [2]