

Class VIII | 2026-27

Maximum Marks: 25

1. All 13 questions are compulsory. The paper has four sections: A, B, C and D.
2. Section A - 5 marks; Section B - 8 marks; Section C - 9 marks; Section D - 3 marks.
3. Choose one correct option in Section A. Show the necessary working in Sections B, C and D.
4. Study the given data and images carefully before answering the related questions.

(5 questions $\times$ 1 mark = 5 marks)

A diagram showing a central box labeled c surrounded by four other boxes in a cross shape. The top box is labeled $c-7$, the bottom box is labeled $c+7$, the left box is labeled $c-1$, and the right box is labeled $c+1$.

- (A) $5c$ (B) $5c + 14$
(C) $5c + 7$ (D) $4c$
2. Which single operation reverses the step “multiply by 3, then add 5” when the output is y ?
- (A) $(y - 5) \div 3$ (B) $3y - 5$
(C) $y \div 3 - 5$ (D) $(y + 5) \div 3$
3. In a four-row pyramid, what is the coefficient of the second bottom entry in the top expression?
- (A) 3 (B) 1
(C) 4 (D) 2
4. A cyclic sum of three three-digit numbers is 1665. What is the sum of the original three digits?
- (A) 12 (B) 45
(C) 15 (D) 5

5. A game doubles your 12 coins and then charges 12 coins. How many coins remain?

- (A) 0 (B) 24
(C) 12 (D) 36

SECTION B

(4 questions $\times$ 2 marks = 8 marks)

6. Two tricks end in $2x + 10 - 2x$ and $5(x + 2) - 5x$. Are their results equal for every x ? Explain.

7. A 2×2 calendar block has top-left date 14. Find the sum along each diagonal. Why are the sums equal?

8. A row of a shape puzzle gives $2s + c = 26$. Another gives $s + c = 17$. Find both shape values without guessing.

9. Construct a three-row pyramid with top 30 and distinct positive whole-number bottom entries. Verify each row.

SECTION C

(3 questions $\times$ 3 marks = 9 marks)

10. Each right-hand number is its row total. Find all three shape values, then the third column's total.

			19
			20
			18

11. A shop pays ₹450 fixed costs and gains ₹9 per sale before fixed costs. Are 105 sales enough for ₹500 profit? Find the least whole-number sales target.

12. A player starts with x coins. Each of three rounds doubles the coins and charges the same fee c . None remain. Find c in terms of x , then the smallest positive whole-number x giving a whole-number fee.

SECTION D

(Application Based Question - 3 marks)

13. Three distinct non-zero digits satisfy $p < q < r$. A two-digit number is to be multiplied by the remaining digit, using each once.

(i) For multiplier p , which arrangement of q and r is better, and why?

(ii) Compare $(10r + p)q$ with $(10q + p)r$ by subtracting the former from the latter.

(iii) State the arrangement that gives the greatest product.