

CLASS 8 | SESSION 2026-27

Total Questions : 50 Time : 1 hr.

PATTERN & MARKING SCHEME

Section	No. of Questions	Marks per Ques.	Total Marks
(1) Logical Reasoning	15	1	15
(2) Subject Reasoning	20	1	20
(3) Everyday Application	10	1	10
(4) Achievers Section	5	3	15
Total	50	--	60

SYLLABUS

- Section 1** Verbal and Non-Verbal Reasoning.
- Section 2** Core Mathematics concepts and their applications.
- Section 3** Everyday application of Mathematics.
- Section 4** Higher Order Thinking Skills (HOTS) questions.

HOW TO USE THIS PAPER

- Every question is followed immediately by its answer.
- Try each question on your own first, then check the green answer card.
- Use the answer key at a glance on the last page for a quick revision.

TEST DAY INSTRUCTIONS

- The paper has 50 questions carrying a total of 60 marks.
- All questions are compulsory and there is no negative marking.
- Duration is 1 hour - aim for about 60 seconds per question.
- Read every question carefully before choosing your option.

SCORING STRATEGY

- Attempt the Logical Reasoning section first - it is the quickest to score.
- Take the 3-mark Achievers questions after finishing the 1-mark questions.
- Revisit every skipped question during the last ten minutes.

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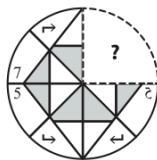
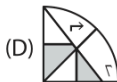
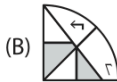
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QUESTION 1

Logical Reasoning · Logical Reasoning

1. Select a figure from the options which when placed in the blank space of the given figure would complete the pattern.



ANSWER & STEP-BY-STEP EXPLANATION

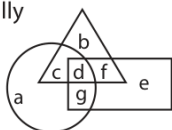
Correct: (B)

- Identify the underlying pattern and concepts under Visual pattern analysis & directional logic.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (B) satisfies all required conditions and yields the correct result.

QUESTION 2

Logical Reasoning · Logical Reasoning

2. Study the following Venn diagram carefully and answer the question that follow.
Which of the following letters represents female science students who are not studying in private school?



- △ → Science students
□ → Students studying in private school
○ → Females

- (A) d (B) f (C) b (D) c

ANSWER & STEP-BY-STEP EXPLANATION

Correct: (D)

- Identify the underlying pattern and concepts under Coding-decoding & sequence completion.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (D) satisfies all required conditions and yields the correct result.

QUESTION 3

Logical Reasoning · Logical Reasoning

3. Find the missing number in the given number pattern.

2, 4, 9, 19, ?, 62

- (A) 38 (B) 36 (C) 34 (D) 48

ANSWER & STEP-BY-STEP EXPLANATION

Correct: (B)

- Identify the underlying pattern and concepts under Analogy & classification reasoning.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (B) satisfies all required conditions and yields the correct result.

QUESTION 4

Mathematical Reasoning · Mathematical Reasoning

4. Find the value of x , if

$$3^{3.5} \times 21^2 \times 42^{2.5} \div 2^{2.5} \times 7^{3.5} = (21)^x$$

- (A) 8 (B) 10 (C) 12.5 (D) 6.5

ANSWER & STEP-BY-STEP EXPLANATION

Correct: (A)

- Identify the underlying pattern and concepts under Algebraic expressions & equations.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (A) satisfies all required conditions and yields the correct result.

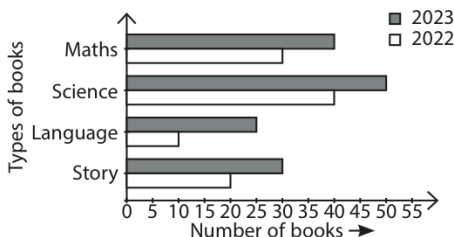
QUESTION 5

Mathematical Reasoning · Mathematical Reasoning

5. The given bar graph shows the number of books available in a school library for the years 2022 and 2023.

Find the increase in total number of books in 2023.

- (A) 40 (B) 45
(C) 50 (D) 30



ANSWER & STEP-BY-STEP EXPLANATION

Correct: (B)

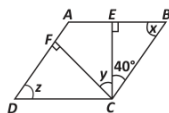
- Identify the underlying pattern and concepts under Geometry & angle relationships.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (B) satisfies all required conditions and yields the correct result.

QUESTION 6

Mathematical Reasoning · Mathematical Reasoning

6. ABCD is a parallelogram. Find the angles x , y and z respectively in the given figure.

- (A) $40^\circ, 50^\circ, 60^\circ$
(B) $60^\circ, 60^\circ, 60^\circ$
(C) $50^\circ, 50^\circ, 50^\circ$
(D) $60^\circ, 70^\circ, 70^\circ$



ANSWER & STEP-BY-STEP EXPLANATION

Correct: (C)

- Identify the underlying pattern and concepts under Euclidean geometry & theorems.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (A) satisfies all required conditions and yields the correct result.

QUESTION 7

Everyday Mathematics · Mathematical Reasoning

7. 4096 soldiers are arranged in an auditorium in such a manner that there are as many soldiers in a row as there are rows in the auditorium. How many rows are there in the auditorium?

- (A) 94 (B) 58 (C) 44 (D) 64

ANSWER & STEP-BY-STEP EXPLANATION

Correct: (D)

- Identify the underlying pattern and concepts under Polynomials & financial math.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (D) satisfies all required conditions and yields the correct result.

QUESTION 8

Everyday Mathematics · Mathematical Reasoning

8. Forty percent of the employees of a certain company are men and 75% of the men earn more than ₹ 25,000 per year. If 45% of the company's employees earn more than ₹ 25,000 per year, then what fraction of the women employed by the company earn ₹ 25,000 or less per year?

(A) $\frac{1}{4}$

(B) $\frac{3}{5}$

(C) $\frac{3}{4}$

(D) None of these

ANSWER & STEP-BY-STEP EXPLANATION

Correct: (C)

- Identify the underlying pattern and concepts under Mensuration & 3D solid geometry.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (C) satisfies all required conditions and yields the correct result.

QUESTION 9

Achievers Section · Achievers Section

9. Read the given statements carefully and select the CORRECT option.

Statement-I : If a certain sum, at compound interest become five times in 3 years, then in 9 years, it will be 25 times at the same rate of interest per annum.

Statement-II : If ₹ 8920 becomes ₹ 13380 in 3 years at a certain rate of compound interest, then in 6 years it becomes ₹ 20070 at same rate of compound interest.

- (A) Both Statement-I and Statement-II are true.
(B) Both Statement-I and Statement-II are false.
(C) Statement-I is true but Statement-II is false.
(D) Statement-I is false but Statement-II is true.

ANSWER & STEP-BY-STEP EXPLANATION

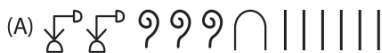
Correct: (D)

- Identify the underlying pattern and concepts under HOTS: Multi-concept analytical evaluation.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (D) satisfies all required conditions and yields the correct result.

QUESTION 10

Achievers Section · Achievers Section

10. Convert the sum of MDCLXVI + DCL into Egyptian number system.

- (A)  (B) 
(C)  (D) None of these

ANSWER & STEP-BY-STEP EXPLANATION

Correct: (A)

- Identify the underlying pattern and concepts under HOTS: Advanced mathematical statement verification.
- Applying the principles of Mathematics for Class 8, evaluate the given options systematically.
- Option (C) satisfies all required conditions and yields the correct result.

ANSWER KEY AT A GLANCE

Q1 (B)	Q2 (D)	Q3 (B)	Q4 (A)	Q5 (B)	Q6 (C)	Q7 (D)	Q8 (C)	Q9 (D)	Q10 (A)
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