RASHTRIYA MILITARY SCHOOL

Common Entrance Test

CLASS VI

Mental Ability & Logical Reasoning

Comprehensive Question Bank with Explanations

8 Chapters	80+ Questions	Detailed Solutions	Exam Tips

About RMS Entrance Exam: The Rashtriya Military School (RMS) Common Entrance Test is conducted for admission to Class VI across five RMS schools in India. The exam consists of two papers: Paper I (Maths & Mental Ability) and Paper II (English & General Knowledge). This book focuses on the **Mental Ability / Reasoning** section of Paper I.

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Your roadmap to mastering RMS Reasoning

Chapter 1: Series Completion

Number Series, Letter Series & Mixed Series

What is Series Completion?

A series is a sequence of numbers, letters, or figures that follows a specific pattern or rule. In RMS entrance exams, you are given a series with one term missing (shown as ?) and you must identify the pattern to find the missing term.

- Arithmetic series: Each term differs by a fixed number (common difference).
- Geometric series: Each term is multiplied by a fixed ratio.
- Square / Cube series: Terms are perfect squares or cubes.
- Alternate series: Two interleaved patterns running simultaneously.
- Mixed series: Combination of operations (+, -, ×, ÷) in a cycle.

Quick Strategy for Series

- Write differences between consecutive terms first.
- Check if differences form another series (second-order difference).
- Look for alternating patterns if differences seem irregular.
- Verify your answer by extending the series one more step.

Practice Questions

Q1. 2, 5, 10, 17, 26, ?

(a) 35
(b) 37
(c) 40
(d) 42

Answer: (b)

Explanation: Differences: 3, 5, 7, 9, 11 (odd numbers). Next difference = 11. 26+11 = 37.

Q2. 3, 6, 12, 24, 48, ?

(a) 72
(b) 84
(c) 96
(d) 100

Answer: (c)

Explanation: Each term is multiplied by 2 (geometric series). 48×2 = 96.

Q3. 1, 4, 9, 16, 25, ?

(a) 30
(b) 36

(c) 35
(d) 49

Answer: (b)

Explanation: Series of perfect squares: $1^2, 2^2, 3^2, 4^2, 5^2, 6^2 = 36$.

Q4. 2, 3, 5, 8, 13, 21, ?
(a) 29
(b) 32
(c) 34
(d) 36

Answer: (c)

Explanation: Fibonacci pattern: each term = sum of two preceding terms. 13+21 = 34.

Q5. 5, 10, 20, 40, 80, ?
(a) 120
(b) 160
(c) 140
(d) 100

Answer: (b)

Explanation: Each term ×2. 80×2 = 160.

Q6. 1, 8, 27, 64, 125, ?
(a) 196
(b) 210
(c) 216
(d) 225

Answer: (c)

Explanation: Series of perfect cubes: $1^3, 2^3, 3^3, 4^3, 5^3, 6^3 = 216$.

Q7. 7, 14, 21, 28, 35, ?
(a) 40
(b) 42
(c) 45
(d) 48

Answer: (b)

Explanation: Multiples of 7. 35+7 = 42.

Q8. 100, 81, 64, 49, 36, ?
(a) 25
(b) 16
(c) 20
(d) 28

Answer: (a)

Explanation: Descending perfect squares: $10^2, 9^2, 8^2, 7^2, 6^2, 5^2 = 25$.

Q9. A, C, E, G, I, ?
(a) J
(b) K
(c) L
(d) M

Answer: (b)

Explanation: Every alternate letter (skip one). After I, skip J → K.

Q10. Z, X, V, T, R, ?

(a) P

(b) Q

(c) N

(d) O

Answer: (a)

Explanation: Reverse alphabet skipping one letter each time. R → skip Q → P.

Chapter 2: Analogy

Word Analogy, Number Analogy & Letter Analogy

Understanding Analogy

Analogy means similarity of relationship. In this type, two pairs of words/numbers/letters are given that share the same relationship. You must find the missing term that maintains the same relationship.

- Word Analogy: Pen : Write :: Knife : Cut (tool and its function).
- Number Analogy: 4 : 16 :: 5 : 25 (number : its square).
- Letter Analogy: ACE : BDF :: GIK : HJL (each letter shifted by +1).
- Common relationships: Part–Whole, Cause–Effect, Worker–Tool, Animal–Young.

Analogy Solving Tips

- Clearly define the relationship in the first pair before looking at options.
- Express it as: 'First is to second as third is to __'.
- Check more than one relationship if the first one seems to match multiple options.
- For number analogies, try squares, cubes, doubles, and digit sums.

Practice Questions

Q1. Doctor : Hospital :: Teacher : ?
(a) Book
(b) School
(c) Student
(d) Chalk
Answer: (b)
Explanation: A Doctor works in a Hospital; a Teacher works in a School.

Q2. Fish : Water :: Bird : ?
(a) Sky
(b) Nest
(c) Feather
(d) Air
Answer: (a)
Explanation: Fish lives in Water; Bird lives in Sky (its natural habitat).

Q3. 4 : 64 :: 3 : ?
(a) 9
(b) 27
(c) 18
(d) 36

Answer: (b)

Explanation: $4^3 = 64$; similarly $3^3 = 27$.

Q4. Pencil : Write :: Scissors : ?

(a) Sew
(b) Cut
(c) Pin
(d) Draw

Answer: (b)

Explanation: Pencil is used to write; Scissors are used to cut.

Q5. Clock : Time :: Thermometer : ?

(a) Heat
(b) Weather
(c) Temperature
(d) Mercury

Answer: (c)

Explanation: Clock measures Time; Thermometer measures Temperature.

Q6. ACE : BDF :: GIK : ?

(a) HJL
(b) IJK
(c) FHJ
(d) HKM

Answer: (a)

Explanation: Each letter in pair 1 is shifted by +1 to get pair 2. G→H, I→J, K→L.

Q7. Lion : Cub :: Cat : ?

(a) Puppy
(b) Kitten
(c) Foal
(d) Calf

Answer: (b)

Explanation: Lion's young is a Cub; Cat's young is a Kitten.

Q8. India : Rupee :: Japan : ?

(a) Dollar
(b) Yen
(c) Euro
(d) Won

Answer: (b)

Explanation: India's currency is Rupee; Japan's currency is Yen.

Q9. 25 : 5 :: 64 : ?

(a) 6
(b) 7
(c) 8
(d) 9

Answer: (c)

Explanation: $25 = 5^2$; $64 = 8^2$. The relationship is: square : square root.

Q10. Ear : Hear :: Eye : ?

(a) Blink
(b) See
(c) Look
(d) View

Answer: (b)

Explanation: Ear is used to Hear; Eye is used to See.

Chapter 3: Classification (Odd One Out)

Identifying the term that does NOT belong to the group

What is Classification?

In classification questions, four or five items are given. Three (or four) of them share a common property while one does not. Your task is to find the odd one out.

- Based on category: Apple, Mango, Carrot, Banana → Carrot (vegetable, rest are fruits).
- Based on number properties: 4, 9, 16, 18, 25 → 18 (not a perfect square).
- Based on letters: AEI, BCD, OUI, EAO → BCD (no vowels; rest are all vowels).
- Based on a shared feature: always ask yourself 'what do three of these have in common?'

Odd One Out – Quick Tricks

- Group items by the broadest category first (animals, planets, fruits, etc.).
- For numbers, check: odd/even, prime, perfect square/cube, multiples.
- For letters, count vowels, consonants, or positional values.
- Eliminate options that share the same trait; the one left out is your answer.

Practice Questions

Q1. Apple, Banana, Carrot, Mango

(a) Apple
(b) Banana
(c) Carrot
(d) Mango

Answer: (c)

Explanation: Carrot is a vegetable; all others are fruits.

Q2. 2, 3, 7, 9, 11

(a) 2
(b) 3
(c) 7
(d) 9

Answer: (d)

Explanation: 9 = 3×3 is not a prime number; all others are prime numbers.

Q3. Mars, Venus, Moon, Jupiter

(a) Mars
(b) Venus
(c) Moon
(d) Jupiter

Answer: (c)

Explanation: Moon is a natural satellite, not a planet; all others are planets.

Q4. Rose, Jasmine, Lotus, Mango

(a) Rose
(b) Jasmine
(c) Lotus
(d) Mango

Answer: (d)

Explanation: Mango is a fruit tree; all others are flowers.

Q5. 4, 9, 16, 20, 25

(a) 4
(b) 9
(c) 16
(d) 20

Answer: (d)

Explanation: 20 is not a perfect square; $4=2^2$, $9=3^2$, $16=4^2$, $25=5^2$.

Q6. Lion, Tiger, Elephant, Eagle

(a) Lion
(b) Tiger
(c) Elephant
(d) Eagle

Answer: (d)

Explanation: Eagle is a bird; all others are land mammals.

Q7. Triangle, Square, Circle, Cuboid

(a) Triangle
(b) Square
(c) Circle
(d) Cuboid

Answer: (d)

Explanation: Cuboid is a 3D shape; all others are 2D (plane) figures.

Q8. AEI, BCD, OUI, EAO

(a) AEI
(b) BCD
(c) OUI
(d) EAO

Answer: (b)

Explanation: BCD contains only consonants; all other groups are made of vowels.

Q9. Taj Mahal, Qutub Minar, Eiffel Tower, Red Fort

(a) Taj Mahal
(b) Qutub Minar
(c) Eiffel Tower
(d) Red Fort

Answer: (c)

Explanation: Eiffel Tower is in France; all others are monuments in India.

Q10. Cow, Goat, Snake, Sheep

(a) Cow
(b) Goat
(c) Snake
(d) Sheep

Answer: (c)

Explanation: Snake is a reptile; all others are mammals that give milk.

Chapter 4: Coding – Decoding

Cracking secret codes using letters, numbers and symbols

What is Coding-Decoding?

Coding is a method of transmitting a message in a hidden form. In reasoning, a word is coded using a rule (letter shift, reverse alphabet, number substitution, etc.) and you must decode another word using the same rule.

- Letter shift (+n): Each letter moves n positions forward in the alphabet. A→D means +3 shift.
- Reverse coding: A=Z, B=Y, C=X … Z=A (mirror image of alphabet).
- Number coding: A=1, B=2, C=3 … Z=26 or vice versa.
- Position reversal: Word is written backwards. CAT coded as TAC.
- Alternate letter: Only odd or even positioned letters are coded.

Coding-Decoding Tips

- Always apply the same rule discovered in the example pair to the question word.
- Write out the alphabet with position numbers (A=1 to Z=26) on rough paper.
- For +n shift, if you go beyond Z, wrap around: Z+1 = A.
- Check whether the entire word is coded or just alternate letters.

Practice Questions

Q1. If CAT = 3120, what is DOG?

(a) 4157
(b) 41523
(c) 4715
(d) 47153

Answer: (c)

Explanation: C=3, A=1, T=20; D=4, O=15, G=7 → DOG = 4715.

Q2. If APPLE is coded as BQQMF, what is MANGO coded as?

(a) NBOHI
(b) NBOHP
(c) MANHI
(d) LZMFN

Answer: (b)

Explanation: Each letter is shifted +1: M→N, A→B, N→O, G→H, O→P → NBOHP.

Q3. If ROSE = TQUG, what is LION?

(a) NKQP
(b) MKQP

(c) NKOP
(d) MJOQ

Answer: (a)

Explanation: Each letter +2: L→N, I→K, O→Q, N→P → NKQP.

Q4. If PEN = 16-5-14, what is INK?
(a) 9-14-11
(b) 9-11-14
(c) 8-13-10
(d) 10-14-11

Answer: (a)

Explanation: A=1, B=2...Z=26. I=9, N=14, K=11 → 9-14-11.

Q5. If FISH is coded as GJTI, what is BIRD?
(a) CJSE
(b) CISE
(c) BISE
(d) DJSE

Answer: (a)

Explanation: +1 shift: B→C, I→J, R→S, D→E → CJSE.

Q6. If TABLE is written as ELBAT, how is CHAIR written?
(a) RIADC
(b) RIADC
(c) RIACL
(d) RIHAC

Answer: (a)

Explanation: The word is reversed: CHAIR reversed = RIADC.

Q7. If A=Z, B=Y, C=X (reverse alphabet), then CAT = ?
(a) ZZG
(b) XZG
(c) XAT
(d) YZH

Answer: (b)

Explanation: C=X, A=Z, T=G → XZG.

Q8. If SCHOOL = 19-3-8-15-15-12, what is the code for HOME?
(a) 8-15-13-5
(b) 7-14-12-4
(c) 9-16-14-6
(d) 8-14-13-4

Answer: (a)

Explanation: A=1 coding: H=8, O=15, M=13, E=5 → 8-15-13-5.

Q9. If ARMY is coded as BSNZ, what is NAVY?
(a) OBWZ
(b) OCWZ
(c) OBWX
(d) NAWZ

Answer: (a)

Explanation: +1 shift: N→O, A→B, V→W, Y→Z → OBWZ.

Q10. If WATER = RETAW, then EARTH = ?

(a) HTRAE

(b) HRTAE

(c) HRTEA

(d) HRAET

Answer: (a)

Explanation: The word is reversed. EARTH reversed = HTRAE.

Chapter 5: Blood Relations

Understanding family relationships and family tree problems

Key Family Relationship Terms

Blood relation problems test your understanding of family trees. Learning standard relationship terms is essential before solving these problems.

- Parents: Father, Mother. Siblings: Brother, Sister.
- Grandparents: Grandfather (Paternal/Maternal), Grandmother.
- Uncle = Father's or Mother's brother. Aunt = Father's or Mother's sister.
- Cousin = Child of uncle or aunt.
- Nephew = Brother's or Sister's son. Niece = Brother's or Sister's daughter.
- Son-in-law = Daughter's husband. Daughter-in-law = Son's wife.

Blood Relations – Drawing a Family Tree

- Always draw a rough diagram with boxes and arrows when solving.
- Use M = Male, F = Female to track gender.
- Move generation by generation: grandparents → parents → children.
- Identify the reference person first, then trace the relationship chain.

Practice Questions

Q1. Pointing to a photograph, Ravi said 'She is the daughter of my grandfather's only son.' How is the girl related to Ravi?

(a) Sister
(b) Cousin
(c) Aunt
(d) Daughter

Answer: (a)

Explanation: Grandfather's only son = Ravi's father. Father's daughter = Ravi's sister.

Q2. A is the father of B. B is the sister of C. D is the husband of A. How is D related to C?

(a) Mother
(b) Grandmother
(c) Sister
(d) Aunt

Answer: (a)

Explanation: A is the father of C. D is the husband of A. So D is the mother of C.

Q3. P is the brother of Q. Q is the mother of R. S is the father of P. How is S related to R?

(a) Father

(b) Uncle
(c) Grandfather
(d) Cousin

Answer: (c)

Explanation: S is P's father. P is Q's brother. So S is Q's father too. Q is R's mother. Therefore S is R's Grandfather.

Q4. X is Y's brother. Y is Z's sister. Z is W's son. How is X related to W?
(a) Son
(b) Nephew
(c) Grandson
(d) Brother

Answer: (a)

Explanation: Z is W's son. Y is Z's sister → Y is also W's child. X is Y's brother → X is W's son.

Q5. If A + B means A is the father of B, A – B means A is the sister of B, then P + R – Q means?
(a) P is the uncle of Q
(b) P is the father of Q's sister
(c) P is the aunt of Q
(d) Q is the niece of P

Answer: (b)

Explanation: P+R: P is father of R. R–Q: R is sister of Q. So P is father of Q's sister R.

Q6. Seema's father's only brother's wife's daughter is Seema's?
(a) Cousin
(b) Sister
(c) Aunt
(d) Niece

Answer: (a)

Explanation: Father's only brother = Uncle. Uncle's wife = Aunt. Aunt's daughter = Cousin.

Q7. Mohan said to Sohan, 'Your mother's husband's sister is my mother.' How is Sohan related to Mohan?
(a) Brother
(b) Uncle
(c) Cousin
(d) Nephew

Answer: (c)

Explanation: Sohan's mother's husband = Sohan's father. Sohan's father's sister = Sohan's aunt. That aunt is Mohan's mother. So Mohan is the son of Sohan's aunt → Mohan's cousin.

Q8. Rita's brother's father's wife's mother is Rita's?
(a) Grandmother
(b) Aunt
(c) Mother
(d) Cousin

Answer: (a)

Explanation: Rita's brother's father = Rita's father. Father's wife = Rita's mother. Mother's mother = Grandmother.

Q9. If 'A $ B' means A is the mother of B, and 'A # B' means A is the brother of B, then A $ B # C means:
(a) A is aunt of C
(b) A is mother of C's brother
(c) C is nephew of A

(d) Both b and c

Answer: (d)

Explanation: A$B: A is mother of B. B#C: B is brother of C. So A is the mother of C's brother, and C is the nephew/niece of A (if male, nephew). Both b and c are correct.

Q10. In a family, there are 6 members. A is the son of B but B is not the mother of A. C and D are married. E is the brother of A. D is the daughter-in-law of B. F is the mother of E. Who is the father of A?

(a) B

(b) C

(c) D

(d) F

Answer: (b)

Explanation: B is not the mother of A but is the father (since A is son of B). D is daughter-in-law of B, so C is B's son. F is mother of E and A. C (married to D) is a son of B. So C is the father of A.

Chapter 6: Direction & Distance

Navigation problems, compass directions and shortest distance

Compass Directions

In direction and distance problems, a person starts from a point and moves in various directions. You must find the final direction faced or the straight-line (shortest) distance from the starting point.

- The 8 compass directions: North, South, East, West, NE, NW, SE, SW.
- Right turn from North → East. Left turn from North → West.
- After two right turns from North → South (opposite direction).
- Shortest distance formula: use Pythagoras theorem → distance = $\sqrt{(x^2 + y^2)}$.
- Shadow rule: Morning sun is in the East; evening sun is in the West.

Direction Problems – Key Rules

- Always draw the path on rough paper using compass directions.
- Track net East-West and net North-South displacement separately.
- Use Pythagoras theorem for final straight-line distance.
- At sunrise shadows fall towards West; at sunset towards East.

Practice Questions

Q1. Rohan walks 10 km North, then 6 km East. How far is he from the starting point?

(a) 12 km
(b) 14 km
(c) 11.66 km
(d) 16 km

Answer: (c)

Explanation: Pythagoras: $\sqrt{(10^2 + 6^2)} = \sqrt{(100+36)} = \sqrt{136} \approx 11.66$ km.

Q2. Starting from a point, Priya walks 3 km South, 4 km West. Straight-line distance from start?

(a) 7 km
(b) 5 km
(c) 6 km
(d) 4 km

Answer: (b)

Explanation: $\sqrt{(3^2 + 4^2)} = \sqrt{(9+16)} = \sqrt{25} = 5$ km.

Q3. A man faces North, turns right, then turns right again. Which direction is he facing?

(a) North
(b) East
(c) South

(d) West

Answer: (c)

Explanation: North → right → East → right → South.

Q4. I walk 5 km East, then turn left and walk 3 km. Which direction am I facing?

(a) North
(b) South
(c) East
(d) West

Answer: (a)

Explanation: Facing East, turn left → facing North.

Q5. Amit starts facing East, turns 90° anti-clockwise. Which direction does he face?

(a) North
(b) West
(c) South
(d) East

Answer: (a)

Explanation: From East, 90° anti-clockwise → North.

Q6. A boy walks 12 km North, turns right and walks 5 km. Distance from start?

(a) 13 km
(b) 17 km
(c) 7 km
(d) 15 km

Answer: (a)

Explanation: $\sqrt{(12^2 + 5^2)} = \sqrt{(144+25)} = \sqrt{169} = 13$ km.

Q7. Mohan's shadow falls behind him in the morning. Which direction is he walking?

(a) North
(b) West
(c) East
(d) South

Answer: (c)

Explanation: In the morning, sun is in the East. Shadow falls West (behind). So Mohan is facing East.

Q8. A car goes 4 km North, then 3 km East, then 4 km South. How far is it from start?

(a) 3 km
(b) 7 km
(c) 5 km
(d) 4 km

Answer: (a)

Explanation: 4 km North and 4 km South cancel. Net: 3 km East. Distance = 3 km.

Q9. Starting facing West, a soldier turns 180°. Which direction does he face?

(a) North
(b) East
(c) South
(d) West

Answer: (b)

Explanation: 180° turn from West → East (exactly opposite).

Q10. Geeta walks 6 km South, then 8 km East, then 6 km North. Distance from start?

(a) 6 km

(b) 8 km

(c) 20 km

(d) 10 km

Answer: (b)

Explanation: 6 km South + 6 km North cancel. Net = 8 km East. Distance = 8 km.

Chapter 7: Ranking & Order

Position from top/bottom, left/right and arrangement problems

Ranking Concepts

These problems involve arranging persons or objects in a row and finding someone's position from one end when the position from the other end is given.

- Key formula: Total = (Rank from top) + (Rank from bottom) – 1.
- In a row of N persons: Rank from left + Rank from right = N + 1.
- For height/weight order: 'taller than 5 students' means rank 6 from top (if no ties).
- Sometimes a range of totals is possible when exact total is not given.

Ranking – Formula to Remember

- Total students = Rank from top + Rank from bottom – 1.
- Position from right = Total – Position from left + 1.
- Draw a number line to visualise positions in a row.
- Re-read the question carefully: 'at least' and 'at most' change the answer.

Practice Questions

Q1. In a class of 40 students, Raj's rank from top is 15. What is his rank from bottom?

(a) 25
(b) 26
(c) 27
(d) 24

Answer: (b)

Explanation: Rank from bottom = 40 – 15 + 1 = 26.

Q2. Priya is 8th from the left and 12th from the right in a row. How many students are in the row?

(a) 18
(b) 19
(c) 20
(d) 21

Answer: (b)

Explanation: Total = 8 + 12 – 1 = 19.

Q3. Sita is 5th from top and 20th from bottom. Total students in class?

(a) 23
(b) 24
(c) 25
(d) 22

Answer: (b)

Explanation: Total = 5 + 20 – 1 = 24.

Q4. In a queue, Arjun is 10th from front and 15th from back. Total persons?

(a) 24

(b) 25

(c) 23

(d) 26

Answer: (a)

Explanation: Total = 10 + 15 – 1 = 24.

Q5. Meena is 7th from the top. There are 5 students below her. Total students?

(a) 11

(b) 12

(c) 13

(d) 14

Answer: (c)

Explanation: Meena's rank from bottom = 5 + 1 = 6. Total = 7 + 6 – 1 = 12. Wait: Total = 7 (above+Meena) + 5 (below) = 12. Correct answer is (b) 12.

Q6. Ramesh stands 6th in a row of 21 students from the left. What is his position from the right?

(a) 15

(b) 16

(c) 14

(d) 17

Answer: (b)

Explanation: Position from right = 21 – 6 + 1 = 16.

Q7. Anil is taller than 8 students and shorter than 6 students. What is Anil's rank from top?

(a) 6

(b) 7

(c) 8

(d) 9

Answer: (b)

Explanation: 6 students are taller than Anil, so Anil's rank from top = 6+1 = 7.

Q8. Kavya is ranked 12th from top and 18th from bottom. How many students are in the class?

(a) 28

(b) 29

(c) 30

(d) 27

Answer: (b)

Explanation: Total = 12 + 18 – 1 = 29.

Q9. In a row, Ritu is 9th from left. Mohit is 5th to the right of Ritu. Mohit's position from left?

(a) 13

(b) 14

(c) 15

(d) 4

Answer: (b)

Explanation: Mohit's position from left = 9 + 5 = 14.

Q10. 5 students stand between Raj and Priya. Raj is 3rd from top. What is Priya's rank from top (below Raj)?

(a) 8
(b) 9
(c) 10
(d) 7

Answer: (b)

Explanation: Priya's rank = 3 + 5 + 1 = 9.

Chapter 8: Non-Verbal Reasoning

Mirror images, water images, paper folding and figure series

Types of Non-Verbal Reasoning

Non-verbal reasoning tests spatial thinking and visual logic. In RMS exams, the following types are commonly asked:

- Mirror Image: Reflection of a figure along a vertical line (left-right reversal).
- Water Image: Reflection of a figure along a horizontal line (top-bottom reversal).
- Paper Folding: A paper is folded and punched; find the pattern when unfolded.
- Figure Series: Identify the next figure in a visual pattern.
- Embedded Figures: Find a smaller shape hidden inside a larger complex shape.
- Counting Figures: Count triangles, squares, or rectangles in a given figure.

Non-Verbal Reasoning Tips

- For mirror images, reverse the figure left-to-right; top-bottom stays the same.
- For water images, flip the figure top-to-bottom; left-right stays the same.
- When counting triangles: count small ones first, then combinations.
- For paper folding, the punch holes appear symmetrically about the fold line.
- Practice sketching figures; spatial ability improves with visual practice.

Practice Questions

Q1. Which is the mirror image of the letter 'R'?

(a) ■ (reversed R)
(b) ■ rotated 90°
(c) R upside down
(d) R unchanged

Answer: (a)

Explanation: Mirror image of R is the horizontally flipped version (like ■).

Q2. The water image of the letter 'A' is:

(a) A flipped top-to-bottom (inverted A)
(b) Reversed A
(c) Rotated A
(d) Same as A

Answer: (a)

Explanation: Water image is reflected along the horizontal axis (top-bottom flip).

Q3. A square sheet is folded once diagonally and a hole is punched at the corner. When unfolded, how many holes appear?

(a) 1
(b) 2
(c) 3
(d) 4

Answer: (b)

Explanation: One diagonal fold creates 2 layers; punching through both gives 2 holes when unfolded.

Q4. How many triangles are there in a figure made of a large triangle divided into 4 equal smaller triangles?

(a) 4
(b) 5
(c) 6
(d) 7

Answer: (b)

Explanation: 4 small triangles + 1 large triangle = 5 triangles total.

Q5. A rectangle is folded in half vertically and a square hole is punched. When unfolded, the number of holes is:

(a) 1
(b) 2
(c) 3
(d) 4

Answer: (b)

Explanation: Vertical fold → 2 layers → 2 symmetric holes when unfolded.

Q6. The mirror image of the word 'MOM' is:

(a) WOW
(b) MOM
(c) MOW
(d) MQM

Answer: (b)

Explanation: MOM is a palindrome that looks the same in a vertical mirror.

Q7. In a figure series: Circle → Half Circle → Quarter Circle → ?

(a) Triangle
(b) Line
(c) Eighth Circle
(d) Square

Answer: (c)

Explanation: Each step the shape is halved. Quarter circle halved = Eighth circle.

Q8. The number of squares in a 3×3 grid of unit squares is:

(a) 9
(b) 12
(c) 14
(d) 16

Answer: (c)

Explanation: 1×1 squares: 9; 2×2 squares: 4; 3×3 square: 1. Total = 9+4+1 = 14.

Q9. The water image of the number '6' is:

(a) 9

(b) 6 inverted

(c) 6 reversed

(d) Same as 6

Answer: (b)

Explanation: Water image is flipped top-to-bottom, giving an inverted 6.

Q10. A sheet folded twice (once horizontally, once vertically) with 1 punch gives how many holes?

(a) 2

(b) 3

(c) 4

(d) 1

Answer: (c)

Explanation: Two folds create 4 layers; one punch gives 4 holes when fully unfolded.

Quick Revision Sheet

Key formulas and rules at a glance

Series Completion	Write differences; check 2nd-order patterns
Analogy	Define the relationship clearly before looking at options
Classification	Find what 3 items share; the 4th is odd one out
Coding-Decoding	Identify shift value (+n or –n); apply to new word
Blood Relations	Total = Rank from top + Rank from bottom – 1
Direction & Distance	Distance = √(horizontal² + vertical²) [Pythagoras]
Ranking & Order	Total in row = Rank from left + Rank from right – 1
Non-Verbal	Mirror = left-right flip; Water = top-bottom flip

Best of luck for your RMS Entrance Examination! Practice regularly, stay disciplined, and you will excel.