

ATMA Analytical Reasoning Skills Sample Paper – 10

Duration: 60 Minutes

Maximum Marks: 60

Instructions

- This paper contains **60** Multiple Choice Questions (Single Correct Answer) in two parts (Part I and Part II), modelled on the Analytical Reasoning Skills portion of **ATMA** entrance.
- Each correct answer carries **+1 marks**. There is a **penalty of 0.25 mark** for each incorrect answer; unattempted questions carry 0.
- Only **one** option is correct. Choose carefully.
- Syllabus level: **Logical reasoning & data interpretation (ATMA Analytical Reasoning Skills)**
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Part I: Analytical Reasoning Skills

Q1. Find the next term in the series: 3, 4, 8, 17, 33, ?

- (A) 56
- (B) 58
- (C) 50
- (D) 60

Q2. Find the next term in the letter series: B, D, G, K, P, ?

- (A) T
- (B) U
- (C) W
- (D) V



Q3. Author : Book :: Composer : ?

- (A) Orchestra
- (B) Instrument
- (C) Symphony
- (D) Stage

Q4. 5 : 30 :: 8 : ? (apply the same rule that takes 5 to 30).

- (A) 72
- (B) 71
- (C) 64
- (D) 80

Q5. Three of the following four numbers are alike in sharing a common property. Which one does **not belong to the group?**

- (A) 37
- (B) 53
- (C) 61
- (D) 57

Q6. In a certain code, each letter is first replaced by its position number in the alphabet (A= 1, B= 2, ...), and then a symbol is attached: the digit-sum of that position is taken, and if the digit-sum is **even the symbol “#” is written after the number, otherwise “*”. For example, K = 11 → digit-sum $1 + 1 = 2$ (even) → 11#. Using this rule, how is the letter **P** coded?**

- (A) 16#
- (B) 16*
- (C) 15*
- (D) 16#*



Q7. Using the same rule as in Q6 (letter \rightarrow position number, then “#” if the position’s digit-sum is even, else “*”), which one of the following codes is **correctly** formed for its letter?

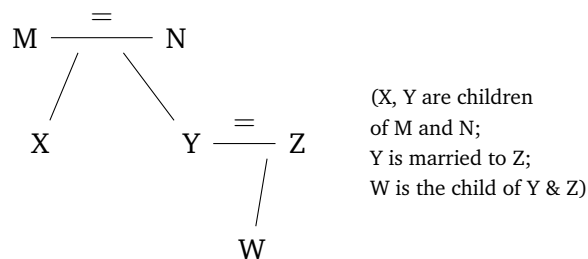
(A) T \rightarrow 20*

(B) M \rightarrow 13#

(C) F \rightarrow 6*

(D) R \rightarrow 18#

Q8. Study the family tree below, where a double line “=” joins a married couple and a downward line joins a parent to a child. How is **W** related to **M**?



(A) Son

(B) Daughter

(C) Grandchild

(D) Nephew

Q9. Pointing to a man in a photograph, Reena said, “His mother is the only daughter of my grandfather.” How is the man related to Reena?

(A) Uncle

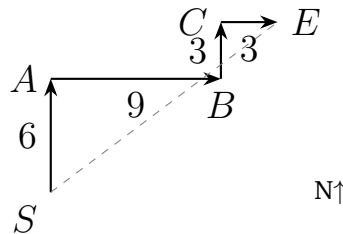
(B) Father

(C) Cousin

(D) Brother



Q10. A delivery rider starts at point S , rides 6 km North to A , then 9 km East to B , then 3 km North to C , and finally 3 km East to reach E . The route is shown below. What is the straight-line distance between S and E , and in which direction does E lie from S ?



- (A) $\sqrt{160}$ km, North-East
- (B) $\sqrt{225}$ km, North-East
- (C) $\sqrt{225}$ km, South-East
- (D) $\sqrt{200}$ km, North-West

Q11. Directions (Q11–Q13): Eight friends — P, Q, R, S, T, U, V and W — sit in a single straight row, all **facing North**, in positions numbered 1 (leftmost) to 8 (rightmost). The following is known:

- P sits at position 8.
- R sits at one of the extreme ends.
- Q sits immediately to the right of R.
- U sits immediately to the right of Q.
- T sits immediately to the right of U.
- S sits immediately to the right of T.
- Exactly one person sits between S and V.

Use the blank row below (positions 1–8, left to right) to work out the arrangement.

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

Q11. Who sits at position 1 (the leftmost seat)?



- (A) R
- (B) Q
- (C) S
- (D) W

Q12. (Refer to the arrangement in Q11.) How many people sit between U and V?

- (A) One
- (B) Two
- (C) Three
- (D) Four

Q13. (Refer to the arrangement in Q11.) Who sits exactly between S and U?

- (A) Q
- (B) V
- (C) R
- (D) T

Q14. In a building with six floors numbered 1 (lowest) to 6 (highest), six people — Anil, Bhanu, Chetan, Divya, Esha and Farah — each live on a different floor. Anil lives immediately above Bhanu. Esha lives on the topmost floor. Chetan lives immediately below Divya. Farah lives on the lowest floor. Chetan lives somewhere above Anil. On which floor does **Divya** live?

- (A) Floor 4
- (B) Floor 5
- (C) Floor 3
- (D) Floor 6



- Q15.** Five seminars — on Finance, Marketing, Operations, HR and Strategy — are scheduled on five consecutive working days, Monday to Friday, one per day. Marketing is on Wednesday. Finance is held the day before Marketing. HR is held on the last day. Operations is held before Finance. On which day is the **Strategy** seminar held?
- (A) Thursday
(B) Tuesday
(C) Monday
(D) Friday
- Q16. Statements:** All managers are leaders. Some leaders are mentors.
Conclusions: (I) Some managers are mentors. (II) Some mentors are leaders.
Which conclusion(s) follow?
- (A) Both I and II follow
(B) Only I follows
(C) Neither follows
(D) Only II follows
- Q17. Statements:** All pens are tools. No tool is fragile.
Conclusions: (I) No pen is fragile. (II) Some tools are pens.
Which conclusion(s) follow?
- (A) Only I follows
(B) Both I and II follow
(C) Only II follows
(D) Neither follows
- Q18. Statement:** A bank notice reads: “Customers are requested to keep their account passbooks updated to avoid disputes over transactions.”



Assumptions: (I) An updated passbook can help resolve transaction disputes. (II) Some customers do not keep their passbooks updated.

Which assumption is **implicit**?

- (A) Only I is implicit
- (B) Only II is implicit
- (C) Both are implicit
- (D) Neither is implicit

Q19. Statement: “A city introduced a congestion-pricing charge in its central zone; over the next year, average peak-hour traffic in that zone fell by 22% while public-transport ridership rose.”

Which of the following is the most logical **inference** from this statement?

- (A) In this city, the congestion charge coincided with lower peak-hour traffic and higher transit use in that zone.
- (B) Congestion pricing eliminates all traffic in every city.
- (C) Public transport is always cheaper than driving.
- (D) Drivers in the city were deliberately causing traffic earlier.

Q20. In a certain code: ‘ $P \square Q$ ’ means $P \geq Q$; ‘ $P \triangle Q$ ’ means $P > Q$; ‘ $P \circ Q$ ’ means $P = Q$; ‘ $P \diamond Q$ ’ means $P \leq Q$; ‘ $P \star Q$ ’ means $P < Q$. Given $A \diamond B$, $B \star C$ and $C \circ D$, which of the following is **definitely true**?

- (A) $A \triangle D$
- (B) $A \circ D$
- (C) $D \diamond A$
- (D) $A \star D$

Q21. In a row of students facing North, Vikram is 12th from the left end and 8th from the right end. If 4 students leave from the left end of the row, what is Vikram’s new position from the left end?

- (A) 12th



- (B) 9th
- (C) 8th
- (D) 7th

Q22. If 1st March 2024 is a Friday, what day of the week will 1st March 2025 be? (Note: 2024 is a leap year, but 29th February 2024 falls *before* 1st March 2024, so it does not lie between the two dates.)

- (A) Friday
- (B) Saturday
- (C) Sunday
- (D) Thursday

Q23. In the grid below, each row follows the same rule: the number in the third column equals (first column \times second column) $-$ second column. Find the value that replaces “?”.

4	3	9
6	5	25
8	7	?

- (A) 49
- (B) 56
- (C) 48
- (D) 42

Q24. Question: What is the age of the father?

Statement I: The father is 4 times as old as his son.

Statement II: Five years ago, the father was 7 times as old as his son.

Which statement(s) are sufficient to answer the question?

- (A) Statement I alone is sufficient.



- (B) Statement II alone is sufficient.
- (C) Both statements together are sufficient, but neither alone is sufficient.
- (D) Each statement alone is sufficient.

Q25. Question: Is the positive integer K a prime number?

Statement I: K is an odd number greater than 2.

Statement II: K has exactly two distinct positive factors.

Which statement(s) are sufficient to answer the question?

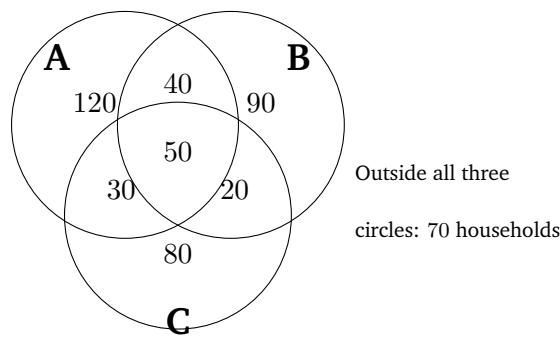
- (A) Statement I alone is sufficient.
- (B) Statement II alone is sufficient.
- (C) Both statements together are needed.
- (D) Neither statement is sufficient.

Q26. Which one of the diagrams below best represents the relationship among **Doctors**, **Surgeons** and **Women**? (Every surgeon is a doctor; some doctors and some surgeons can be women; some women are neither.)

- (A) “Surgeons” wholly inside “Doctors”, and “Women” overlapping both partially.
- (B) Three mutually separate circles.
- (C) “Women” wholly inside “Surgeons”.
- (D) Three circles, all coinciding completely.

Q27. Directions (Q27–Q30): In a survey of 500 households, each household was asked which of three streaming services — **A**, **B** and **C** — it subscribes to. The three-circle Venn diagram below shows the results (each region gives the number of households).





- Q27.** How many households subscribe to **exactly one** of the three services?
- (A) 280
 (B) 310
 (C) 250
 (D) 290
- Q28.** (Refer to the Venn diagram in Q27.) How many households subscribe to **exactly two** of the three services?
- (A) 100
 (B) 90
 (C) 140
 (D) 50
- Q29.** (Refer to the Venn diagram in Q27.) How many households subscribe to **all three** services, and how many subscribe to **none**?
- (A) All three = 40; none = 70
 (B) All three = 70; none = 50
 (C) All three = 50; none = 70
 (D) All three = 30; none = 80
- Q30.** (Refer to the Venn diagram in Q27.) How many households in total subscribe to service **A** (in any combination)?



- (A) 240
- (B) 200
- (C) 260
- (D) 220

Part II: Analytical Reasoning Skills

- Q31.** Find the next term in the series: 5, 11, 23, 47, 95, ?
- (A) 185
 - (B) 190
 - (C) 191
 - (D) 189
- Q32.** Find the next term in the letter series: A, C, F, J, O, ?
- (A) S
 - (B) T
 - (C) V
 - (D) U
- Q33.** Glove : Hand :: Sock : ?
- (A) Shoe
 - (B) Foot
 - (C) Leg
 - (D) Wool
- Q34.** 7 : 50 :: 9 : ? (apply the same rule that takes 7 to 50).
- (A) 82
 - (B) 81
 - (C) 90



(D) 80

Q35. Three of the following four numbers are alike in sharing a common property. Which one does **not** belong to the group?

(A) 64

(B) 125

(C) 216

(D) 100

Q36. In a certain code, each letter of a word is replaced by the letter that comes **two places after** it in the alphabet (so $A \rightarrow C$, $B \rightarrow D$, ..., $Y \rightarrow A$, $Z \rightarrow B$). Using this rule, how is the word **LEARN** coded?

(A) NFCTP

(B) MGCTP

(C) NGCTP

(D) NGDTP

Q37. In a certain code the value of a word is the **sum of the alphabet positions** of its letters ($A=1$, $B=2$, ...). For example, $CAT = 3 + 1 + 20 = 24$ and $DOG = 4 + 15 + 7 = 26$. Using the same rule, what is the value of the word **BAT**?

(A) 22

(B) 23

(C) 24

(D) 21

Q38. A is the father of B. C is the wife of A. D is the son of C. How is **D** related to **B**?

(A) Father

(B) Son

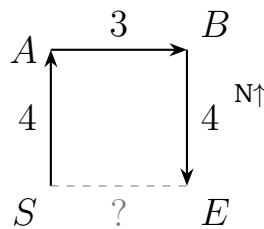


- (C) Brother
- (D) Uncle

Q39. Pointing to a girl, Ramesh said, “She is the daughter of the wife of the only son of my father.” How is the girl related to Ramesh? (Ramesh is the only son of his father.)

- (A) Sister
- (B) Niece
- (C) Cousin
- (D) Daughter

Q40. A jogger starts at point S , runs 4 km North to A , then 3 km East to B , then 4 km South to reach E . The route is shown below. What is the straight-line distance between S and E , and in which direction does E lie from S ?



- (A) 3 km, East
- (B) 5 km, North-East
- (C) 4 km, East
- (D) 3 km, West

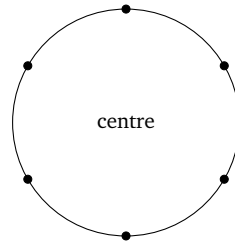
Q41. Directions (Q41–Q43): Six friends — A, B, C, D, E and F — sit around a circular table facing the centre. The following is known:

- A sits directly opposite D.
- B sits to the immediate left of A.



- C sits to the immediate right of A.
- E sits to the immediate left of D.
- F is not adjacent to A.

The empty circular layout below may be used for working.



Q41. Who sits to the immediate right of D?

- (A) E
- (B) F
- (C) C
- (D) B

Q42. (Refer to the arrangement in Q41.) Who sits directly opposite B?

- (A) A
- (B) D
- (C) C
- (D) E

Q43. (Refer to the arrangement in Q41.) Which one of the following pairs is seated immediately next to each other?

- (A) D and E
- (B) B and C
- (C) A and D
- (D) B and E



- Q44.** Five boxes — P, Q, R, S and T — are stacked one above another. R is immediately above P. Q is at the bottom. T is immediately above S. S is somewhere above R. Which box is at the **top** of the stack?
- (A) S
(B) R
(C) T
(D) P
- Q45.** In a race of five runners — J, K, L, M and N — J finished before K but after L. M finished last. N finished immediately after L. Who finished **first**?
- (A) N
(B) L
(C) J
(D) K
- Q46. Statements:** All books are papers. All papers are files.
Conclusions: (I) All books are files. (II) Some files are books.
Which conclusion(s) follow?
- (A) Only I follows
(B) Only II follows
(C) Neither follows
(D) Both I and II follow
- Q47. Statements:** Some doctors are dancers. No dancer is lazy.
Conclusions: (I) Some doctors are not lazy. (II) All dancers are doctors.
Which conclusion(s) follow?
- (A) Only I follows



- (B) Only II follows
- (C) Both I and II follow
- (D) Neither follows

Q48. Statement: “Several passengers slipped on the wet station platform during the monsoon and were injured.”

Courses of Action: (I) The station authority should install anti-skid flooring and warning signs on the platform. (II) The railway should permanently shut down the station during the monsoon.

Which course of action logically follows?

- (A) Only II follows
- (B) Both follow
- (C) Only I follows
- (D) Neither follows

Q49. Statement: “All the high-rise apartments in the colony have a backup power generator.”

Conclusions: (I) No low-rise house in the colony has a backup generator. (II) If a building in the colony is a high-rise apartment, it has a backup generator.

Which conclusion(s) follow?

- (A) Only I follows
- (B) Only II follows
- (C) Both follow
- (D) Neither follows

Q50. Using the same code as in Q20 — ‘ $P \square Q$ ’ means $P \geq Q$; ‘ $P \triangle Q$ ’ means $P > Q$; ‘ $P \circ Q$ ’ means $P = Q$; ‘ $P \diamond Q$ ’ means $P \leq Q$; ‘ $P \star Q$ ’ means $P < Q$ — you are given $L \triangle M$, $M \square N$ and $N \triangle O$. Which of the following is **definitely true**?

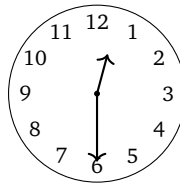


- (A) $O \square L$
- (B) $L \circ O$
- (C) $L \triangle O$
- (D) $L \star O$

Q51. In a class, Meena ranks 7th from the top and 26th from the bottom in a test. How many students are there in the class?

- (A) 33
- (B) 34
- (C) 30
- (D) 32

Q52. What is the angle (the smaller one) between the hour hand and the minute hand of a clock at exactly 3:30? The clock face is shown for reference.



- (A) 75°
- (B) 90°
- (C) 80°
- (D) 60°

Q53. In the grid below, the number in the third column equals the **sum of the squares** of the first two columns. Find the value that replaces “?”.



2	3	13
4	1	17
5	2	?

- (A) 27
- (B) 29
- (C) 25
- (D) 30

Q54. Question: What is the two-digit number?

Statement I: The sum of its two digits is 9.

Statement II: The number is 9 more than the number formed by reversing its digits.

Which statement(s) are sufficient to answer the question?

- (A) Statement I alone is sufficient.
- (B) Statement II alone is sufficient.
- (C) Both statements together are needed, but neither alone is sufficient.
- (D) Neither statement is sufficient.

Q55. Question: On which day of the week was a certain seminar held?

Statement I: The seminar was held two days after Monday.

Statement II: The seminar was held neither on a weekend nor on a Tuesday.

Which statement(s) are sufficient to answer the question?

- (A) Statement I alone is sufficient.
- (B) Statement II alone is sufficient.
- (C) Both statements together are needed.
- (D) Each statement alone is sufficient.



- Q56.** Which one of the following best represents the relationship among **Vegetables**, **Carrots** and **Fruits**? (All carrots are vegetables; no vegetable is a fruit.)
- (A) Three mutually overlapping circles.
- (B) “Carrots” wholly inside “Vegetables”, and “Fruits” a separate circle outside both.
- (C) “Fruits” wholly inside “Vegetables”.
- (D) All three circles coinciding completely.
- Q57. Directions (Q57–Q60):** The table below shows the number of units (in thousands) of four products — W, X, Y and Z — sold by a company in four quarters of a year. Study it and answer the questions that follow.

Product	Q1	Q2	Q3	Q4
W	20	25	30	25
X	15	20	25	40
Y	30	20	10	20
Z	35	35	35	35

- Q57.** What is the total number of units (in thousands) sold across all four products in **Q3**?
- (A) 90
- (B) 120
- (C) 95
- (D) 100
- Q58.** (Refer to the table in Q57.) Which product had the **highest total annual sales** (sum over all four quarters)?
- (A) W
- (B) X
- (C) Z



(D) Y

Q59. (Refer to the table in Q57.) By what **percentage** did the sales of product X grow from Q1 to Q4?

(A) 150%

(B) $166.\bar{6}\%$

(C) 40%

(D) 125%

Q60. (Refer to the table in Q57.) What is the **average** quarterly sales (in thousands) of product W?

(A) 25

(B) 30

(C) 20

(D) 27.5



Detailed Solutions

Q1.

Solution

Concept — Number series (difference pattern): Examine the gaps between consecutive terms to find the rule.

Step 1 — List the differences:

$$4 - 3 = 1, \quad 8 - 4 = 4, \quad 17 - 8 = 9, \quad 33 - 17 = 16.$$

Step 2 — Identify the rule: The differences are 1, 4, 9, 16 — the perfect squares $1^2, 2^2, 3^2, 4^2$. The next difference is $5^2 = 25$.

Step 3 — Compute the next term:

$$33 + 25 = 58.$$

Why other options are wrong:

- 56 would need a gap of 23; 60 a gap of 27 — neither is a perfect square.
- 50 would need a gap of 17, breaking the square pattern.

Final Answer: The next term is 58 \Rightarrow **B**

Answer: (B) [Go Back to Q1](#)

Q2.

Solution

Concept — Letter series: Convert letters to position numbers and study the gaps.

Step 1 — Positions:

$$B = 2, \quad D = 4, \quad G = 7, \quad K = 11, \quad P = 16.$$

Step 2 — Differences:

$$4 - 2 = 2, \quad 7 - 4 = 3, \quad 11 - 7 = 4, \quad 16 - 11 = 5.$$

The gaps are 2, 3, 4, 5, so the next gap is 6.



Step 3 — Next position:

$$16 + 6 = 22 \Rightarrow \text{the 22nd letter} = V.$$

Why other options are wrong:

- T (20) uses a gap of 4; U (21) a gap of 5; W (23) a gap of 7 — all miss the gap of 6.

Final Answer: The next letter is V \Rightarrow D

Answer: (D) [Go Back to Q2](#)

Q3.

Solution

Concept — Creator : Creation: The first term is the person who produces the work named by the second term.

Step 1 — Decode the given pair: An *author* produces a *book*.

Step 2 — Apply to the second pair: A *composer* produces a *symphony* (a musical composition), just as an author produces a book.

Why other options are wrong:

- Orchestra is the group that performs, not what the composer creates.
- Instrument is a tool, not the created work.
- Stage is a venue, unrelated to authorship of the work.

Final Answer: Composer produces a Symphony \Rightarrow C

Answer: (C) [Go Back to Q3](#)

Q4.

Solution

Concept — Number analogy: Find a function that maps 5 to 30, then apply the *same* function to 8.

Step 1 — Spot the rule: Note that $5^2 = 25$ and $25 + 5 = 30$, i.e. $5^2 + 5 = 30$. Equivalently, the rule is $n^2 + n = n(n + 1)$ (the number times the next number). Check: $5 \times 6 = 30$.



Step 2 — Verify on the given pair:

$$5^2 + 5 = 25 + 5 = 30, \quad \text{or } 5 \times 6 = 30. \quad \checkmark$$

Step 3 — Apply to 8:

$$8^2 + 8 = 64 + 8 = 72, \quad \text{or } 8 \times 9 = 72.$$

Why other options are wrong:

- 64 is just 8^2 and forgets the “+ n ” term.
- 71 (= $64 + 7$) and 80 (= 8×10) do not match the verified rule $n(n + 1)$.

Final Answer: $8 \rightarrow 8 \times 9 = 72 \Rightarrow$ A

Answer: (A) [Go Back to Q4](#)

Q5.

Solution

Concept — Classification (prime numbers): Look for a property shared by three of the four numbers.

Step 1 — Test each number for primality:

$$37 = \text{prime}, \quad 53 = \text{prime}, \quad 61 = \text{prime}.$$

Each has no divisor other than 1 and itself.

Step 2 — Check 57: $57 = 3 \times 19$, so 57 is *not* prime (it is composite).

Step 3 — Confirm the odd one: 37, 53, 61 are primes; 57 is the only composite. The odd one out is 57.

Why other options are wrong:

- 37, 53, 61 are each prime, so they belong to the group.

Final Answer: 57 is not prime \Rightarrow D

Answer: (D) [Go Back to Q5](#)



Q6.

Solution

Concept — Symbol + number hybrid code: Replace the letter by its position number, then attach “#” if the digit-sum of that number is even, else “*”.

Step 1 — Position of P: P is the 16th letter, so the number is 16.

Step 2 — Digit-sum of 16: $1 + 6 = 7$, which is *odd*.

Step 3 — Choose the symbol: Odd digit-sum \Rightarrow attach “*”. So $P \rightarrow 16*$.

Why other options are wrong:

- $16\#$ uses “#”, which is for an even digit-sum; here the digit-sum 7 is odd.
- $15*$ uses the wrong position number (15 is O, not P).
- $16\#*$ attaches two symbols, which the rule never does.

Final Answer: $P \rightarrow 16* \Rightarrow$

Answer: (B) [Go Back to Q6](#)

Q7.

Solution

Concept — Verify each coded option: For each letter, compute its position, the digit-sum, and the correct symbol; keep the option that matches.

Step 1 — Test T $\rightarrow 20*$: $T = 20$; digit-sum $2 + 0 = 2$ (even) \Rightarrow should be “#”. So $20*$ is *wrong*.

Step 2 — Test M $\rightarrow 13\#$: $M = 13$; digit-sum $1 + 3 = 4$ (even) \Rightarrow correct symbol is “#”. So $13\#$ is *correct*.

Step 3 — Cross-check the remaining options:

- $F \rightarrow 6*$: $F = 6$; digit-sum 6 (even) \Rightarrow should be “#”, so $6*$ is wrong.
- $R \rightarrow 18\#$: $R = 18$; digit-sum $1 + 8 = 9$ (odd) \Rightarrow should be “*”, so $18\#$ is wrong.

Step 4 — Conclusion: Only $M \rightarrow 13\#$ is formed correctly.

Final Answer: $M \rightarrow 13\#$ is correct \Rightarrow

Answer: (B) [Go Back to Q7](#)



Q8.

Solution

Concept — Family tree reading: Trace generations from the tree.

Step 1 — Top generation: M and N are a married couple. X and Y are their children.

Step 2 — Next generation: Y is married to Z, and W is the child of Y and Z.

Step 3 — Relate W to M: W is the child of Y, and Y is the child of M. So W is M's child's child, i.e. M's grandchild. (W's gender is not given, so "grandchild" is the precise relation.)

Why other options are wrong:

- Son/Daughter would make W a child of M, one generation too high.
- Nephew would require W to be the child of M's sibling, not of M's child.

Final Answer: W is the grandchild of M \Rightarrow C

Answer: (C) [Go Back to Q8](#)

Q9.

Solution

Concept — Coded relation: Break the statement into pieces, innermost first.

Step 1 — “the only daughter of my grandfather”: The only daughter of Reena's grandfather is Reena's mother (or aunt). Since she is the *only* daughter, she is Reena's mother.

Step 2 — “His mother is (Reena's mother)”: So the man's mother is the same person as Reena's mother. Hence the man and Reena share the same mother — they are siblings.

Step 3 — Conclusion: The man is Reena's brother.

Why other options are wrong:

- Uncle/Father would be a generation above; the man shares Reena's mother, so he is of her generation.
- Cousin would require a different mother (a child of Reena's aunt/uncle), but the grandfather has only one daughter.

Final Answer: The man is Reena's brother \Rightarrow D



Answer: (D) [Go Back to Q9](#)

Q10.

Solution

Concept — Direction sense (net displacement): Add east/west moves and north/south moves separately, then use Pythagoras.

Step 1 — Net East–West: 9 km East + 3 km East = 12 km East.

Step 2 — Net North–South: 6 km North + 3 km North = 9 km North.

Step 3 — Straight-line distance:

$$\sqrt{12^2 + 9^2} = \sqrt{144 + 81} = \sqrt{225} = 15 \text{ km.}$$

Step 4 — Direction: *E* is to the East and North of *S*, i.e. in the North-East direction.

Why other options are wrong:

- $\sqrt{160}$ and $\sqrt{200}$ use wrong net legs.
- South-East and North-West are wrong quadrants; the net move is East and North, i.e. North-East.

Final Answer: $\sqrt{225} = 15$ km, North-East \Rightarrow **B**

Answer: (B) [Go Back to Q10](#)

Q11.

Solution

Concept — Linear arrangement (8 seats, all facing North): Anchor the fixed person, then chain the “immediately to the right” clues.

Step 1 — Fix P: P = position 8 (given).

Step 2 — Place R at an end: R is at an extreme end. Position 8 is taken by P, so R = position 1.

Step 3 — Chain the right-neighbour clues from R:

- Q immediately right of R \Rightarrow Q = 2.
- U immediately right of Q \Rightarrow U = 3.



- T immediately right of U \Rightarrow T = 4.
- S immediately right of T \Rightarrow S = 5.

Step 4 — Place V: “Exactly one person between S and V” means $V = S + 2 = 7$ (the person at 6 sits between $S = 5$ and $V = 7$).

Step 5 — Place W: The only seat left is 6, so $W = 6$.

Step 6 — Final row:

1	2	3	4	5	6	7	8
R	Q	U	T	S	W	V	P

Check: R at end \checkmark ; the chain R-Q-U-T-S fills 1–5 \checkmark ; one person (W) between S(5) and V(7) \checkmark ; P = 8 \checkmark .

Conclusion for Q11: R sits at position 1.

Why other options are wrong:

- Q is at 2, S is at 5, W is at 6 — none is at position 1.

Final Answer: Position 1 is R \Rightarrow

Answer: (A) [Go Back to Q11](#)

Q12.

Solution

Concept — Read off the solved row from Q11. The final seating (positions 1–8) is:

1	2	3	4	5	6	7	8
R	Q	U	T	S	W	V	P

Step 1 — Locate U and V: U is at position 3 and V is at position 7.

Step 2 — Count people between them: Positions strictly between 3 and 7 are 4, 5, 6 — that is T, S, W, i.e. **three** people.

Why other options are wrong:

- One, Two, Four all miscount the gap between positions 3 and 7.

Final Answer: Three people sit between U and V \Rightarrow



Answer: (C) [Go Back to Q12](#)

Q13.

Solution

Concept — Read off the solved row. Using the same seating:

1	2	3	4	5	6	7	8
R	Q	U	T	S	W	V	P

Step 1 — Locate S and U: U is at position 3 and S is at position 5.

Step 2 — Find who is exactly between: The single seat exactly between positions 3 and 5 is position 4, which is occupied by T.

Why other options are wrong:

- Q is at 2 and V is at 7, neither between U and S; R is at the far left end (1).

Final Answer: The person between U and S is T \Rightarrow

Answer: (D) [Go Back to Q13](#)

Q14.

Solution

Concept — Floor puzzle: Place the strongest clues first; floors 1 (lowest) to 6 (highest).

Step 1 — Fix the ends: Esha is on the topmost floor (floor 6). Farah is on the lowest floor (floor 1).

Step 2 — Use adjacency clues: Anil is immediately above Bhanu (Anil = Bhanu +1). Chetan is immediately below Divya (Divya = Chetan +1). Chetan is somewhere above Anil.

Step 3 — Place the blocks in floors 2–5: Floors 2, 3, 4, 5 remain for Bhanu, Anil, Chetan, Divya. With Bhanu–Anil as a lower pair and Chetan–Divya as a higher pair (since Chetan is above Anil):

2 : Bhanu, 3 : Anil, 4 : Chetan, 5 : Divya.

Check: Anil(3) immediately above Bhanu(2) ✓; Divya(5) immediately above Chetan(4) ✓; Chetan(4) above Anil(3) ✓.



Step 4 — Read Divya’s floor: Divya is on floor 5.

Why other options are wrong:

- Floor 6 is Esha; floor 4 is Chetan; floor 3 is Anil.

Final Answer: Divya lives on floor 5 ⇒ **B**

Answer: (B) [Go Back to Q14](#)

Q15.

Solution

Concept — Scheduling (Mon–Fri, one per day): Place fixed clues, then fill the rest.

Step 1 — Fixed days: Marketing = Wednesday. Finance is the day before Marketing ⇒ Finance = Tuesday. HR is on the last day ⇒ HR = Friday.

Step 2 — Use “Operations before Finance”: Finance is Tuesday, so Operations must be Monday (the only earlier day).

Step 3 — Remaining slot: Days used so far: Mon (Operations), Tue (Finance), Wed (Marketing), Fri (HR). The only day left is Thursday, and the only seminar left is Strategy. So Strategy = Thursday.

Step 4 — Final schedule:

Mon	Tue	Wed	Thu	Fri
Operations	Finance	Marketing	Strategy	HR

Why other options are wrong:

- Tuesday is Finance, Monday is Operations, Friday is HR.

Final Answer: Strategy is on Thursday ⇒ **A**

Answer: (A) [Go Back to Q15](#)

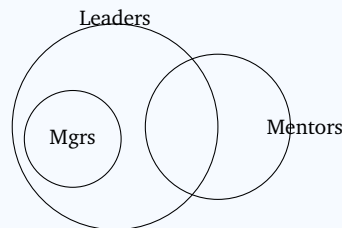


Q16.

Solution

Concept — Syllogism (All + Some): Draw the certain containment and the possible overlap.

Step 1 — Diagram: “All managers are leaders” puts the Managers circle inside Leaders. “Some leaders are mentors” overlaps Leaders and Mentors, but that overlap need not touch the Managers part.



Step 2 — Test Conclusion I (Some managers are mentors): The mentor-overlap may lie entirely in the non-manager part of Leaders, so managers need not be mentors. **I does not follow.**

Step 3 — Test Conclusion II (Some mentors are leaders): “Some leaders are mentors” is symmetric, so some mentors are indeed leaders. **II follows.**

Why other options are wrong:

- “Both” and “Only I” wrongly accept the unsupported I.
- “Neither” wrongly rejects the valid II.

Final Answer: Only II follows ⇒ D

Answer: (D) [Go Back to Q16](#)

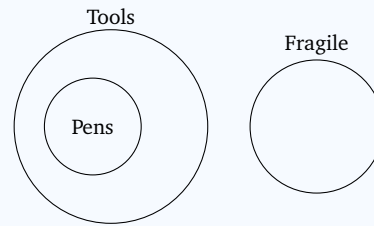
Q17.

Solution

Concept — Syllogism (All + No): Draw nested containment plus exclusion.

Step 1 — Diagram: “All pens are tools” puts Pens inside Tools. “No tool is fragile” separates Tools entirely from Fragile.





Step 2 — Test Conclusion I (No pen is fragile): Pens are inside Tools, and Tools are wholly outside Fragile, so no pen can be fragile. **I follows.**

Step 3 — Test Conclusion II (Some tools are pens): Since all pens are tools and pens exist as a defined set, those pens are tools, so some tools are pens. **II follows.**

Step 4 — Combine: Both I and II follow.

Why other options are wrong:

- “Only I”, “Only II”, and “Neither” each drop a valid conclusion.

Final Answer: Both I and II follow \Rightarrow **B**

Answer: (B) [Go Back to Q17](#)

Q18.

Solution

Concept — Statement & Assumption: An implicit assumption is something taken for granted for the notice to make sense.

Step 1 — Test Assumption I: The notice claims an updated passbook helps “avoid disputes”. For the request to be meaningful, the bank assumes an updated passbook actually helps resolve disputes. **I is implicit.**

Step 2 — Test Assumption II: The bank issues the reminder because it presumes at least some customers currently fail to keep passbooks updated; otherwise the request would be pointless. **II is implicit.**

Step 3 — Combine: Both assumptions underlie the notice.

Why other options are wrong:

- “Only I” and “Only II” each drop a genuine assumption.
- “Neither” ignores the clear purpose of the reminder.

Final Answer: Both are implicit \Rightarrow **C**



Answer: (C) [Go Back to Q18](#)

Q19.

Solution

Concept — Inference: An inference must be supported by the data without over-generalising.

Step 1 — What the data says: For *this* city, after the congestion charge, peak-hour traffic in the zone fell 22% and transit ridership rose, over one year.

Step 2 — Evaluate option A: It states that in this city the charge coincided with lower peak-hour traffic and higher transit use — a careful restatement of the given facts. **This is a safe inference.**

Why other options are wrong:

- “Eliminates all traffic in every city” over-generalises wildly.
- “Public transport is always cheaper” is unrelated to the data.
- “Drivers deliberately causing traffic” assumes a motive not stated.

Final Answer: The charge coincided with lower traffic and higher transit use here \Rightarrow

Answer: (A) [Go Back to Q19](#)

Q20.

Solution

Concept — Coded inequalities: Translate symbols, then chain.

Step 1 — Decode:

$$A \diamond B \Rightarrow A \leq B, \quad B \star C \Rightarrow B < C, \quad C \circ D \Rightarrow C = D.$$

Step 2 — Combine: $A \leq B < C = D$. From $A \leq B$ and $B < C$ we get $A < C$, and since $C = D$, we get $A < D$.

Step 3 — Match to code: $A < D$ is written as $A \star D$.

Why other options are wrong:

- $A \triangle D$ ($A > D$) reverses the proven strict inequality.
- $A \circ D$ ($A = D$) is false since $A < D$.



- $D \diamond A$ ($D \leq A$) contradicts $A < D$.

Final Answer: $A < D$, i.e. $A \star D \Rightarrow \boxed{D}$

Answer: (D) [Go Back to Q20](#)

Q21.

Solution

Concept — Ranking with people leaving: People removed from the *left* reduce the count to the left of the target.

Step 1 — Vikram’s original left position: 12th from the left, so 11 students stand to his left.

Step 2 — Remove 4 from the left end: Those 4 all stood to Vikram’s left (since they are at the far left). So students to his left now = $11 - 4 = 7$.

Step 3 — New left position:

$$7 + 1 = 8\text{th from the left.}$$

Why other options are wrong:

- 12th ignores that anyone left; 9th removes only 3; 7th forgets the “+1” for Vikram himself.

Final Answer: 8th from the left $\Rightarrow \boxed{C}$

Answer: (C) [Go Back to Q21](#)

Q22.

Solution

Concept — Calendar (odd days): Moving forward one year shifts the weekday by the number of odd days between the dates.

Step 1 — Days between the two dates: From 1 Mar 2024 to 1 Mar 2025. The 29 Feb 2024 lies *before* 1 Mar 2024, so it is not in this interval. The interval covers Mar 2024 through Feb 2025, which contains the *non-leap* February of 2025, i.e. exactly 365 days.

Step 2 — Odd days: $365 = 52 \times 7 + 1$, so 1 odd day.



Step 3 — Shift the weekday: Friday + 1 day = Saturday.

Why other options are wrong:

- Friday would mean 0 odd days; Sunday/Thursday use a wrong odd-day count.

Final Answer: 1 Mar 2025 is a Saturday \Rightarrow **B**

Answer: (B) [Go Back to Q22](#)

Q23.

Solution

Concept — Grid rule: Apply the stated rule ($\text{col3} = \text{col1} \times \text{col2} - \text{col2}$) and verify on known rows.

Step 1 — Verify Row 1: $4 \times 3 - 3 = 12 - 3 = 9 \checkmark$ (matches the given 9).

Step 2 — Verify Row 2: $6 \times 5 - 5 = 30 - 5 = 25 \checkmark$ (matches the given 25).

Step 3 — Apply to Row 3:

$$8 \times 7 - 7 = 56 - 7 = 49.$$

Why other options are wrong:

- 56 forgets the “– second column” term.
- 48 and 42 do not follow the verified rule.

Final Answer: ? = 49 \Rightarrow **A**

Answer: (A) [Go Back to Q23](#)

Q24.

Solution

Concept — Data sufficiency: Check each statement alone, then together.

Step 1 — Statement I alone ($F = 4S$): This is one equation in two unknowns; F could be 40 (with $S = 10$), 80 (with $S = 20$), etc. Not unique. **I alone insufficient.**

Step 2 — Statement II alone ($F - 5 = 7(S - 5)$): Again one equation in two unknowns; many (F, S) pairs satisfy it. Not unique. **II alone insufficient.**



Step 3 — Both together: Solve the two equations:

$$F = 4S \quad \text{and} \quad F - 5 = 7(S - 5).$$

Substitute $F = 4S$:

$$4S - 5 = 7S - 35 \Rightarrow 35 - 5 = 7S - 4S \Rightarrow 30 = 3S \Rightarrow S = 10.$$

Then $F = 4 \times 10 = 40$. Unique answer. **Both together sufficient.**

Step 4 — Conclusion: Neither alone fixes F , but together they give $F = 40$.

Why other options are wrong:

- “I alone”, “II alone”, and “each alone” fail because each single equation has infinitely many solutions.

Final Answer: Both together sufficient, neither alone \Rightarrow C

Answer: (C) [Go Back to Q24](#)

Q25.

Solution

Concept — Primality test via definition: A prime has exactly two distinct positive factors (1 and itself).

Step 1 — Statement I alone (K odd, $K > 2$): K could be 7 (prime) or 9 (not prime). So I does not settle primality. **I alone insufficient.**

Step 2 — Statement II alone (K has exactly two distinct positive factors): “Exactly two distinct positive factors” is the *definition* of a prime number. So K must be prime. **II alone sufficient (answer: yes, K is prime).**

Step 3 — Conclusion: Statement II alone answers the question; Statement I alone does not.

Why other options are wrong:

- “I alone” fails (odd > 2 can be composite, e.g. 9).
- “Both needed” and “Neither” are wrong because II alone already decides it.

Final Answer: Statement II alone is sufficient \Rightarrow B

Answer: (B) [Go Back to Q25](#)



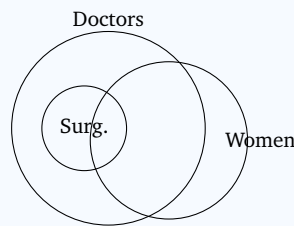
Q26.

Solution

Concept — Logical Venn relationships: Decide containment vs. overlap for each pair.

Step 1 — Surgeons vs. Doctors: Every surgeon is a doctor, so the Surgeons circle lies wholly inside the Doctors circle.

Step 2 — Women vs. the rest: Some doctors are women, some surgeons are women, and some women are neither. So the Women circle overlaps both Doctors and Surgeons partially, but is not contained in either.



Step 3 — Pick the matching description: “Surgeons wholly inside Doctors, and Women overlapping both partially” is exactly option (A).

Why other options are wrong:

- Three separate circles ignore that surgeons are doctors.
- “Women wholly inside Surgeons” is false (some women are neither).
- Fully coinciding circles are false.

Final Answer: Surgeons in Doctors, Women overlapping both \Rightarrow

[Go Back to Q26](#)

Q27.

Solution

Concept — Three-circle Venn (exactly one): “Exactly one” means the three outer-most regions belonging to a single circle only.

Step 1 — Read the single-only regions: Only A = 120; only B = 90; only C = 80.

Step 2 — Add them:

$$120 + 90 + 80 = 290.$$

Step 3 — Sanity check the whole diagram: The seven inside regions plus “none”



should total 500:

$$120 + 90 + 80 + 40 + 30 + 20 + 50 + 70 = 500. \checkmark$$

Why other options are wrong:

- 280, 310, 250 either include or drop an overlap region.

Final Answer: Exactly one = 290 households \Rightarrow

Answer: (D) [Go Back to Q27](#)

Q28.

Solution

Concept — Three-circle Venn (exactly two): “Exactly two” means the three pairwise-overlap regions that exclude the central all-three region.

Step 1 — Read the exactly-two regions: $A \cap B$ only = 40; $A \cap C$ only = 30; $B \cap C$ only = 20.

Step 2 — Add them:

$$40 + 30 + 20 = 90.$$

Why other options are wrong:

- 100 wrongly adds the centre 50 to one pair.
- 140 adds the all-three region 50; 50 is just the all-three region itself.

Final Answer: Exactly two = 90 households \Rightarrow

Answer: (B) [Go Back to Q28](#)

Q29.

Solution

Concept — Three-circle Venn (all-three and none): The centre region is “all three”; “none” is the figure outside all circles.

Step 1 — All three: The central region (inside A, B and C) reads 50.

Step 2 — None: The stated figure outside all three circles is 70.

Step 3 — Cross-check the total: Sum of all regions = 290 (exactly one) + 90



(exactly two) + 50 (all three) + 70 (none) = 500 ✓.

Why other options are wrong:

- All three = 40 or 70 or 30 misreads the centre; none = 50 or 80 misreads the outside figure.

Final Answer: All three = 50; none = 70 ⇒ **C**

Answer: (C) [Go Back to Q29](#)

Q30.

Solution

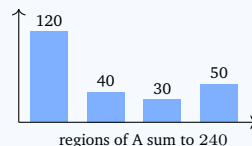
Concept — Total in one circle: Add every region that lies inside circle A.

Step 1 — Regions inside A: Only A = 120; $A \cap B$ only = 40; $A \cap C$ only = 30; all three = 50.

Step 2 — Add them:

$$120 + 40 + 30 + 50 = 240.$$

Step 3 — Cross-check: Total A (240) should not exceed the surveyed total minus none. Since $240 < 500$, the figure is consistent.



Why other options are wrong:

- 200 drops the all-three region; 260 and 220 add or drop a wrong region.

Final Answer: Total subscribing to A = 240 ⇒ **A**

Answer: (A) [Go Back to Q30](#)



Q31.

Solution

Concept — Number series (multiply-and-add): Test a fixed multiplier with a constant added each step.

Step 1 — Compare consecutive terms:

$$11 = 5 \times 2 + 1, \quad 23 = 11 \times 2 + 1, \quad 47 = 23 \times 2 + 1, \quad 95 = 47 \times 2 + 1.$$

Step 2 — Identify the rule: Each term is “previous $\times 2 + 1$ ”.

Step 3 — Compute the next term:

$$95 \times 2 + 1 = 190 + 1 = 191.$$

Why other options are wrong:

- 190 forgets the “+1”; 189 and 185 do not fit “ $\times 2 + 1$ ”.

Final Answer: The next term is 191 \Rightarrow

[Go Back to Q31](#)

Q32.

Solution

Concept — Letter series: Convert letters to positions and study the gaps.

Step 1 — Positions:

$$A = 1, \quad C = 3, \quad F = 6, \quad J = 10, \quad O = 15.$$

Step 2 — Differences:

$$3 - 1 = 2, \quad 6 - 3 = 3, \quad 10 - 6 = 4, \quad 15 - 10 = 5.$$

The gaps are 2, 3, 4, 5, so the next gap is 6.

Step 3 — Next position:

$$15 + 6 = 21 \Rightarrow \text{the 21st letter} = U.$$



Why other options are wrong:

- S(19) uses gap 4; T(20) gap 5; V(22) gap 7 — all miss the gap of 6.

Final Answer: The next letter is U \Rightarrow

Answer: (D) [Go Back to Q32](#)

Q33.

Solution

Concept — Covering : Body-part: The first term is the garment that covers the body part named second.

Step 1 — Decode the given pair: A *glove* is worn to cover the *hand*.

Step 2 — Apply to the second pair: A *sock* is worn to cover the *foot*, exactly as a glove covers the hand.

Why other options are wrong:

- Shoe is also worn on the foot but is footwear, not the body part being covered (it is the analogue of the glove, not the hand).
- Leg is too general; a sock covers the foot, not the whole leg.
- Wool is a material, not a body part.

Final Answer: A sock covers the Foot \Rightarrow

Answer: (B) [Go Back to Q33](#)

Q34.

Solution

Concept — Number analogy: Find a function mapping 7 to 50, then apply it to 9.

Step 1 — Spot the rule: Note $7^2 = 49$ and $49 + 1 = 50$, i.e. the rule is $n^2 + 1$.

Step 2 — Verify on the given pair:

$$7^2 + 1 = 49 + 1 = 50. \checkmark$$

Step 3 — Apply to 9:

$$9^2 + 1 = 81 + 1 = 82.$$



Why other options are wrong:

- 81 is just 9^2 and forgets the “+1”.
- 90 ($= 9 \times 10$) and 80 do not match the verified rule $n^2 + 1$.

Final Answer: $9 \rightarrow 9^2 + 1 = 82 \Rightarrow \boxed{A}$

Answer: (A) [Go Back to Q34](#)

Q35.

Solution

Concept — Classification (perfect cubes): Look for a property shared by three of the four numbers.

Step 1 — Test each number for being a perfect cube:

$$64 = 4^3, \quad 125 = 5^3, \quad 216 = 6^3.$$

Each is a perfect cube.

Step 2 — Check 100: $100 = 10^2$ is a perfect *square*, but $4^3 = 64$ and $5^3 = 125$, so 100 is not a perfect cube.

Step 3 — Confirm the odd one: 64, 125, 216 are cubes; 100 is not. The odd one out is 100.

Why other options are wrong:

- 64, 125, 216 are each perfect cubes, so they belong to the group.

Final Answer: 100 is not a perfect cube $\Rightarrow \boxed{D}$

Answer: (D) [Go Back to Q35](#)

Q36.

Solution

Concept — Caesar shift code: Replace each letter by the one two places further along the alphabet, wrapping past Z.

Step 1 — Shift each letter of LEARN by +2:

$$L \rightarrow N, \quad E \rightarrow G, \quad A \rightarrow C, \quad R \rightarrow T, \quad N \rightarrow P.$$



Step 2 — Assemble the code: NGCTP = NGCTP.

Why other options are wrong:

- NFCTP mis-shifts E (E→G, not F).
- MGCTP mis-shifts L (L→N, not M).
- NGDTP mis-shifts A (A→C, not D).

Final Answer: LEARN → NGCTP ⇒

Answer: (C) [Go Back to Q36](#)

Q37.

Solution

Concept — Positional sum code: Add the alphabet positions of the letters.

Step 1 — Verify the rule on the examples: CAT = 3 + 1 + 20 = 24 ✓; DOG = 4 + 15 + 7 = 26 ✓.

Step 2 — Positions of B, A, T: B = 2, A = 1, T = 20.

Step 3 — Add them:

$$2 + 1 + 20 = 23.$$

Why other options are wrong:

- 24 is the value of CAT, not BAT (B is one less than C).
- 22 and 21 misadd the three positions.

Final Answer: BAT = 23 ⇒

Answer: (B) [Go Back to Q37](#)

Q38.

Solution

Concept — Relation chain: Track each person step by step.

Step 1 — A and C: A is the father of B, and C is the wife of A, so C is the mother of B.

Step 2 — D: D is the son of C. Since C is B's mother, D is another son of B's mother, i.e. D and B share the same mother.



Step 3 — Relate D to B: D is therefore B's brother.

Why other options are wrong:

- Father/Uncle would put D a generation above B; D is of the same generation.
- "Son" would make D a child of B, one generation too low.

Final Answer: D is the brother of B \Rightarrow

Answer: (C) [Go Back to Q38](#)

Q39.

Solution

Concept — Coded relation: Decode the phrase from the innermost part outward.

Step 1 — "the only son of my father": Since Ramesh is the only son of his father, this person is Ramesh himself.

Step 2 — "the wife of (the only son of my father)": This is the wife of Ramesh.

Step 3 — "the daughter of (Ramesh's wife)": The daughter of Ramesh's wife is Ramesh's daughter.

Why other options are wrong:

- Sister/Cousin would put the girl in Ramesh's own generation; she is one generation below.
- Niece would require her to be the child of Ramesh's sibling, not of his wife.

Final Answer: The girl is Ramesh's daughter \Rightarrow

Answer: (D) [Go Back to Q39](#)

Q40.

Solution

Concept — Direction sense (net displacement): Combine the north/south moves and the east/west moves separately.

Step 1 — Net North–South: 4 km North then 4 km South cancel out \Rightarrow net 0 km vertically.

Step 2 — Net East–West: Only one east move of 3 km \Rightarrow net 3 km East.

Step 3 — Straight-line distance and direction: Since the vertical displacement



is 0, E lies exactly 3 km due East of S .

Why other options are wrong:

- 5 km North-East would need a non-zero north displacement; here the north and south legs cancel.
- 4 km East uses the wrong leg; the only east move is 3 km.
- West is the wrong direction — the net move is to the East.

Final Answer: 3 km, due East \Rightarrow

[Go Back to Q40](#)

Q41.

Solution

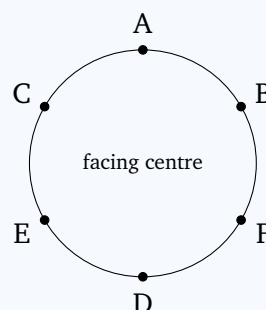
Concept — Circular arrangement (6 seats, facing centre): For a person facing the centre, “immediate left” is the clockwise neighbour and “immediate right” is the anti-clockwise neighbour. Fix one person, place the others by the clues.

Step 1 — Place A and its neighbours: B is to A’s immediate left and C to A’s immediate right, so B and C are exactly the two neighbours of A.

Step 2 — Place D: A sits directly opposite D.

Step 3 — Place D’s neighbours: “F is not adjacent to A” — but A’s neighbours are already B and C, so the remaining people E and F must be the two neighbours of D. E is to D’s immediate left, leaving F to D’s immediate right.

Step 4 — Write the clockwise order (taking clockwise as the “immediate left” direction):



Clockwise: A, B, F, D, E, C.

Step 5 — Immediate right of D: Immediate right is the anti-clockwise neighbour of D, which is F.



Why other options are wrong:

- E is to D's immediate *left*, not right; B and C are A's neighbours.

Final Answer: Immediate right of D is F \Rightarrow

Answer: (B) [Go Back to Q41](#)

Q42.

Solution

Concept — Read off the solved circle from Q41. Clockwise order: A, B, F, D, E, C.

Step 1 — Opposite seats in a circle of 6: A person directly opposite is three seats away. Listing clockwise positions 1–6: A(1), B(2), F(3), D(4), E(5), C(6).

Step 2 — Opposite of B: B is at position 2; the seat directly opposite (position $2 + 3 = 5$) is E.

Why other options are wrong:

- A is opposite D, not B; C and D are not opposite B.

Final Answer: Directly opposite B is E \Rightarrow

Answer: (D) [Go Back to Q42](#)

Q43.

Solution

Concept — Read off adjacencies. Clockwise order: A, B, F, D, E, C (and C wraps back to A).

Step 1 — List the adjacent pairs: A–B, B–F, F–D, D–E, E–C, C–A.

Step 2 — Test the options:

- D and E: positions 4 and 5 — adjacent. ✓
- B and C: positions 2 and 6 — not adjacent.
- A and D: positions 1 and 4 — opposite, not adjacent.
- B and E: positions 2 and 5 — not adjacent.

Final Answer: D and E are immediate neighbours \Rightarrow



Answer: (A) [Go Back to Q43](#)

Q44.

Solution

Concept — Vertical stacking puzzle: Number the levels 1 (bottom) to 5 (top); place the strongest clues first.

Step 1 — Fix Q: Q is at the bottom \Rightarrow level 1.

Step 2 — Use the consecutive pairs: “R immediately above P” makes P–R a block (R on top of P). “T immediately above S” makes S–T a block (T on top of S). “S somewhere above R” puts the S–T block higher than the P–R block.

Step 3 — Fill levels 2–5: The lower block P–R takes levels 2, 3 and the higher block S–T takes levels 4, 5:

1 : Q, 2 : P, 3 : R, 4 : S, 5 : T.

Check: R(3) immediately above P(2) \checkmark ; T(5) immediately above S(4) \checkmark ; S(4) above R(3) \checkmark .

Step 4 — Read the top: Level 5 is T.

Why other options are wrong:

- S is at level 4, R at 3, P at 2 — none is on top.

Final Answer: The top box is T \Rightarrow

Answer: (C) [Go Back to Q44](#)

Q45.

Solution

Concept — Ordering by finishing position: Translate each clue into a left-to-right order (first to last).

Step 1 — Fix the last place: M finished last.

Step 2 — Use “N immediately after L”: L is immediately followed by N \Rightarrow the block L, N.

Step 3 — Place J and K: L finished before J (“J after L”) and J before K. So the



order grows as L, N, J, K, with M last:

$$L \rightarrow N \rightarrow J \rightarrow K \rightarrow M.$$

Check: J after L ✓; J before K ✓; N immediately after L ✓; M last ✓.

Step 4 — Read the first place: L finished first.

Why other options are wrong:

- N is second (right after L); J is third; K is fourth.

Final Answer: L finished first \Rightarrow

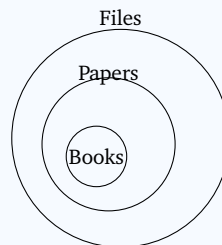
Answer: (B) [Go Back to Q45](#)

Q46.

Solution

Concept — Syllogism (All + All, nested): Two “all” statements give a chain of containments.

Step 1 — Diagram: “All books are papers” puts Books inside Papers; “All papers are files” puts Papers inside Files. So Books \subseteq Papers \subseteq Files.



Step 2 — Test Conclusion I (All books are files): Books are inside Papers, which are inside Files, so every book is a file. **I follows.**

Step 3 — Test Conclusion II (Some files are books): Books exist and are all files, so at least those files are books. **II follows.**

Step 4 — Combine: Both I and II follow.

Final Answer: Both I and II follow \Rightarrow

Answer: (D) [Go Back to Q46](#)

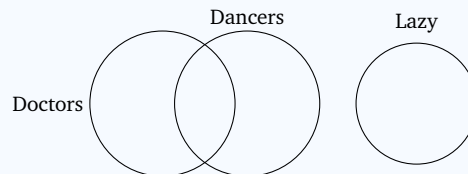


Q47.

Solution

Concept — Syllogism (Some + No): Draw the partial overlap and the exclusion, then test each conclusion.

Step 1 — Diagram: “Some doctors are dancers” overlaps Doctors and Dancers. “No dancer is lazy” separates Dancers entirely from Lazy.



Step 2 — Test Conclusion I (Some doctors are not lazy): The doctors who are dancers cannot be lazy (no dancer is lazy). These doctor-dancers exist, so some doctors are definitely not lazy. **I follows.**

Step 3 — Test Conclusion II (All dancers are doctors): Only *some* doctors are dancers; nothing forces every dancer to be a doctor. **II does not follow.**

Why other options are wrong:

- “Only II” and “Both” wrongly accept the unsupported II.
- “Neither” wrongly rejects the valid I.

Final Answer: Only I follows \Rightarrow

Answer: (A) [Go Back to Q47](#)

Q48.

Solution

Concept — Statement & Course of Action: A valid course of action must directly address the problem and be reasonable (not extreme).

Step 1 — Identify the problem: Passengers slipped on a wet platform and were injured during the monsoon.

Step 2 — Test Course I (anti-skid flooring and warning signs): This directly reduces slipping and warns passengers — a practical, proportionate fix. **I follows.**

Step 3 — Test Course II (permanently shut the station every monsoon): Shutting a station for an entire season is disproportionate and harms all passengers; the problem can be solved without it. **II does not follow.**



Why other options are wrong:

- “Only II” and “Both” accept the extreme, impractical action.
- “Neither” rejects the sensible safety measure I.

Final Answer: Only I follows \Rightarrow

Answer: (C) [Go Back to Q48](#)

Q49.

Solution

Concept — Statement & Conclusion: A conclusion follows only if it is forced by the statement, with no extra assumption.

Step 1 — Restate the statement: Every high-rise apartment in the colony has a backup generator.

Step 2 — Test Conclusion I (No low-rise house has a generator): The statement only talks about high-rise apartments; it says nothing about low-rise houses, which could also have generators. **I does not follow.**

Step 3 — Test Conclusion II (a high-rise apartment has a generator): This is simply a restatement of the universal claim: if a building is a high-rise apartment, then it has a generator. **II follows.**

Why other options are wrong:

- “Only I” and “Both” accept the unwarranted claim about low-rise houses.
- “Neither” rejects the direct restatement II.

Final Answer: Only II follows \Rightarrow

Answer: (B) [Go Back to Q49](#)

Q50.

Solution

Concept — Coded inequalities: Decode each symbol, then chain the relations.

Step 1 — Decode:

$$L \triangle M \Rightarrow L > M, \quad M \square N \Rightarrow M \geq N, \quad N \triangle O \Rightarrow N > O.$$



Step 2 — Combine: $L > M \geq N > O$. From $L > M$ and $M \geq N$ we get $L > N$, and with $N > O$ we get $L > O$.

Step 3 — Match to code: $L > O$ is written as $L \Delta O$.

Why other options are wrong:

- $L \star O$ ($L < O$) and $O \square L$ ($O \geq L$) reverse the proven inequality.
- $L \circ O$ ($L = O$) is false since $L > O$ strictly.

Final Answer: $L > O$, i.e. $L \Delta O \Rightarrow$ C

Answer: (C) [Go Back to Q50](#)

Q51.

Solution

Concept — Total from two-sided rank: Total = (rank from top) + (rank from bottom) – 1, because the person is counted in both ranks.

Step 1 — Add the two ranks: $7 + 26 = 33$.

Step 2 — Subtract the double-count: Meena is counted once from the top and once from the bottom, so subtract 1:

$$33 - 1 = 32.$$

Why other options are wrong:

- 33 forgets to subtract the double-counted Meena.
- 34 adds instead of subtracting 1; 30 subtracts too much.

Final Answer: The class has 32 students \Rightarrow D

Answer: (D) [Go Back to Q51](#)



Q52.

Solution

Concept — Clock-hand angle: Find each hand's angle from the 12 position, then take the difference. Each hour mark is 30° ; the minute hand moves 6° per minute and the hour hand 0.5° per minute.

Step 1 — Minute hand at 30 minutes:

$$30 \times 6^\circ = 180^\circ \text{ (pointing at 6).}$$

Step 2 — Hour hand at 3:30: At 3:00 the hour hand is at $3 \times 30^\circ = 90^\circ$. In 30 minutes it moves a further $30 \times 0.5^\circ = 15^\circ$:

$$90^\circ + 15^\circ = 105^\circ.$$

Step 3 — Angle between the hands:

$$180^\circ - 105^\circ = 75^\circ.$$

This is already less than 180° , so it is the smaller angle.

Why other options are wrong:

- 90° forgets the hour hand's 15° creep past 3.
- 80° and 60° use wrong hand positions.

Final Answer: The angle is $75^\circ \Rightarrow$

Answer: (A) [Go Back to Q52](#)

Q53.

Solution

Concept — Grid rule (sum of squares): The third column = (first column)² + (second column)²; verify on the known rows.

Step 1 — Verify Row 1: $2^2 + 3^2 = 4 + 9 = 13 \checkmark$.

Step 2 — Verify Row 2: $4^2 + 1^2 = 16 + 1 = 17 \checkmark$.

Step 3 — Apply to Row 3:

$$5^2 + 2^2 = 25 + 4 = 29.$$



Why other options are wrong:

- 27 and 30 do not match $5^2 + 2^2$.
- 25 is only 5^2 and drops the 2^2 term.

Final Answer: $? = 29 \Rightarrow$ B

Answer: (B) [Go Back to Q53](#)

Q54.

Solution

Concept — Data sufficiency: Let the number be $10a + b$ (tens digit a , units digit b). Test each statement alone, then together.

Step 1 — Statement I alone ($a + b = 9$): Many numbers satisfy this: 18, 27, 36, 45, ... Not unique. **I alone insufficient.**

Step 2 — Statement II alone: “9 more than its reverse” gives $10a + b = (10b + a) + 9 \Rightarrow 9a - 9b = 9 \Rightarrow a - b = 1$. Many numbers satisfy this: 21, 32, 43, ... Not unique. **II alone insufficient.**

Step 3 — Both together: Solve $a + b = 9$ and $a - b = 1$:

$$2a = 10 \Rightarrow a = 5, \quad b = 9 - 5 = 4.$$

So the number is 54 — a unique value. **Both together sufficient.**

Why other options are wrong:

- “I alone” and “II alone” each leave several possibilities.
- “Neither” is wrong because the two together pin down 54.

Final Answer: Both together sufficient, neither alone \Rightarrow C

Answer: (C) [Go Back to Q54](#)



Q55.

Solution

Concept — Data sufficiency (unique day): A statement is sufficient if it fixes exactly one day of the week.

Step 1 — Statement I alone: “Two days after Monday” is Tuesday, then Wednesday — a single, definite day. **I alone sufficient (Wednesday).**

Step 2 — Statement II alone: “Neither a weekend nor a Tuesday” rules out Sat, Sun and Tue, leaving Mon, Wed, Thu, Fri — four possibilities, not one. **II alone insufficient.**

Step 3 — Conclusion: Statement I alone determines the day; Statement II alone does not.

Why other options are wrong:

- “II alone” and “each alone” fail because II leaves four options.
- “Both needed” is wrong since I alone already fixes Wednesday.

Final Answer: Statement I alone is sufficient \Rightarrow

Answer: (A) [Go Back to Q55](#)

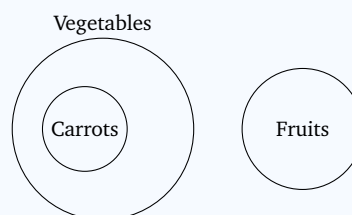
Q56.

Solution

Concept — Logical Venn relationships: Decide containment vs. exclusion for each pair.

Step 1 — Carrots vs. Vegetables: All carrots are vegetables, so the Carrots circle lies wholly inside the Vegetables circle.

Step 2 — Fruits vs. Vegetables: No vegetable is a fruit, so the Fruits circle is completely separate from the Vegetables circle (and hence from Carrots too).



Step 3 — Pick the matching description: “Carrots wholly inside Vegetables, and Fruits a separate circle outside both” is option (B).



Why other options are wrong:

- Three overlapping circles wrongly let fruits be vegetables.
- “Fruits inside Vegetables” contradicts “no vegetable is a fruit”.
- Fully coinciding circles are clearly false.

Final Answer: Carrots inside Vegetables, Fruits separate \Rightarrow **B**

Answer: (B) [Go Back to Q56](#)

Q57.

Solution

Concept — Reading a data table (column total): Add the Q3 entry of every product.

Step 1 — Read the Q3 column: $W = 30, X = 25, Y = 10, Z = 35$ (thousands).

Step 2 — Add them:

$$30 + 25 + 10 + 35 = 100.$$

Why other options are wrong:

- 90, 95 and 120 misread or mis-add one of the four Q3 figures.

Final Answer: Total Q3 sales = 100 thousand \Rightarrow **D**

Answer: (D) [Go Back to Q57](#)

Q58.

Solution

Concept — Row totals (annual sales): Sum each product’s four quarters and compare.

Step 1 — Compute each annual total (thousands):

$$W : 20 + 25 + 30 + 25 = 100, \quad X : 15 + 20 + 25 + 40 = 100,$$

$$Y : 30 + 20 + 10 + 20 = 80, \quad Z : 35 + 35 + 35 + 35 = 140.$$

Step 2 — Compare: $140 > 100 = 100 > 80$, so Z has the highest annual total.

Why other options are wrong:



- W and X tie at 100, below Z; Y is the lowest at 80.

Final Answer: Product Z has the highest annual sales \Rightarrow **C**

Answer: (C) [Go Back to Q58](#)

Q59.

Solution

Concept — Percentage growth: $\text{Growth \%} = \frac{\text{final} - \text{initial}}{\text{initial}} \times 100.$

Step 1 — Read X's values: Q1 = 15, Q4 = 40 (thousands).

Step 2 — Increase: $40 - 15 = 25.$

Step 3 — Convert to percentage:

$$\frac{25}{15} \times 100 = \frac{2500}{15} = 166.\bar{6}\% \approx 166.67\%.$$

Why other options are wrong:

- 150% would need the increase to be 22.5; 40% divides by the wrong base; 125% uses an increase of 18.75.

Final Answer: Growth $\approx 166.\bar{6}\% \Rightarrow$ **B**

Answer: (B) [Go Back to Q59](#)

Q60.

Solution

Concept — Average of a row: Add the four quarterly figures and divide by 4.

Step 1 — Read W's values: Q1 = 20, Q2 = 25, Q3 = 30, Q4 = 25 (thousands).

Step 2 — Sum:

$$20 + 25 + 30 + 25 = 100.$$

Step 3 — Divide by 4:

$$\frac{100}{4} = 25.$$

Why other options are wrong:

- 30 and 20 are individual quarters, not the average; 27.5 mis-sums the four



figures.

Final Answer: Average quarterly sales of W = 25 thousand \Rightarrow

[Go Back to Q60](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	D	3	C	4	A	5	D
6	B	7	B	8	C	9	D	10	B
11	A	12	C	13	D	14	B	15	A
16	D	17	B	18	C	19	A	20	D
21	C	22	B	23	A	24	C	25	B
26	A	27	D	28	B	29	C	30	A
31	C	32	D	33	B	34	A	35	D
36	C	37	B	38	C	39	D	40	A
41	B	42	D	43	A	44	C	45	B
46	D	47	A	48	C	49	B	50	C
51	D	52	A	53	B	54	C	55	A
56	B	57	D	58	C	59	B	60	A

