ATMA Analytical Reasoning Skills Sample Paper – 2

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.
- Marking: **+1 mark** for every correct answer, **a penalty of** 0.25 **mark** for every incorrect answer, and **0** for an unattempted question.
- Only **one** option is correct. Choose carefully.
- Syllabus level: **Logical reasoning & data interpretation (ATMA Analytical Reasoning Skills)**
- This is a computer-based test (CBT). Use of mobile phones, calculators, or electronic gadgets is strictly prohibited.

Part I: Analytical Reasoning Skills

Q1. Find the next term in the series: $3,\ 7,\ 16,\ 35,\ 74,\ ?$

(A) 135

(B) 148

(C) 153

(D) 162

Q2. Find the next term in the series: C, F, K, R, ?

(A) Y

(B) A

(C) Z

(D) B

Q3. $7 : 56 :: 9 :?$ (choose the term that bears the same relationship)

(A) 90

(B) 81

(C) 72

(D) 99

Q4. **Glove** is related to **Hand** in the same way as **Sock** is related to:

(A) Shoe

(B) Wool

(C) Knee

(D) Foot

Q5. Three of the following four numbers are alike in a certain way and form a group. Which number does *not* belong to that group?

(A) 48

(B) 50

(C) 65

(D) 101

Q6. In a certain coded language, "sun rises east" is written as "*pa lo mi*", "east is red" is written as "*mi ka tu*", and "red sun glows" is written as "*tu pa ne*". What is the code for "sun"?

(A) *pa*

(B) *mi*

(C) *tu*

(D) *lo*

Q7. Using the same coded language as above ("sun rises east" = "*pa lo mi*", "east is red" = "*mi ka tu*", "red sun glows" = "*tu pa ne*"), what is the code for "red"?

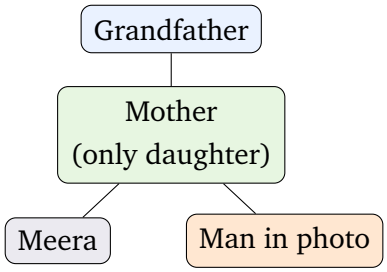
(A) *pa*

(B) *tu*

(C) *mi*

(D) *ne*

Q8. Pointing to a photograph, Meera said, "He is the son of the only daughter of my grandfather." How is the man in the photograph related to Meera?



(A) Cousin

(B) Uncle

(C) Nephew

(D) Brother

Q9. If P $+$ Q means "P is the mother of Q", P $-$ Q means "P is the brother of Q", and P $\times$ Q means "P is the father of Q", then which of the following shows that **M** is the maternal uncle of **T**?

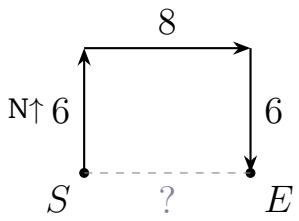
(A) M $-$ N $+$ T

(B) M $+$ N $-$ T

(C) M $\times$ N $-$ T

(D) M $-$ N $\times$ T

Q10. A delivery rider starts at point S, rides 6 km North, then turns East and rides 8 km, then turns South and rides 6 km to reach point E. How far is E from the starting point S, and in which direction does E lie from S?



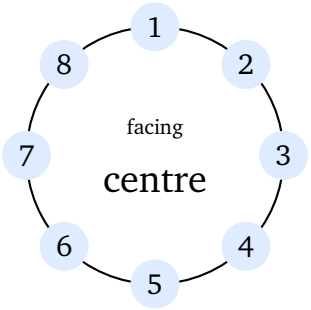
(A) 14 km, East

(B) 10 km, North-East

(C) 8 km, East

(D) 6 km, South-East

Q11. Directions (Q11–Q13): Eight friends — A, B, C, D, E, F, G and H — are seated around a circular table, all *facing the centre*. (For a person facing the centre, "left" is the clockwise direction and "right" is the anticlockwise direction.) The known facts are: A is third to the left of E. G is immediately to the right of E. C is an immediate neighbour of both E and F. D sits exactly between B and H. H is immediately to the left of A.



Who sits second to the left of B?

(A) G

(B) E

(C) C

(D) H

Q12. (Refer to the circular seating in Q11.) Which of the following pairs sits diametrically opposite each other?

(A) A and C

(B) B and E

(C) H and F

(D) A and G

Q13. (Refer to the circular seating in Q11.) Who sits third to the left of D?

(A) E

(B) C

(C) F

(D) G

Q14. Five families — the Roys, the Sens, the Iyers, the Khans and the Patels — live on five different floors of a building (floor 1 at the bottom to floor 5 at the top). The Iyers live on an even-numbered floor. The Roys live immediately above the Khans. The Sens live on the topmost floor. Exactly two floors separate the Roys and the Patels. On which floor do the Iyers live?

(A) Floor 1

(B) Floor 3

(C) Floor 2

(D) Floor 4

Q15. In a class test, Anita scored more than Bharat but less than Chetan. Divya scored more than Chetan. Esha scored less than Bharat. If they are ranked from highest to lowest score, who stands second?

(A) Divya

(B) Chetan

(C) Anita

(D) Bharat

Q16. **Statements:** All pens are markers. Some markers are crayons.
Conclusions: I. Some pens are crayons. II. Some crayons are markers.
Which conclusion(s) follow(s)?

(A) Only I follows

(B) Both I and II follow

(C) Neither I nor II follows

(D) Only II follows

Q17. **Statements:** All roses are flowers. All flowers are plants.
Conclusions: I. All roses are plants. II. Some plants are roses.
Which conclusion(s) follow(s)?

(A) Both I and II follow

(B) Only I follows

(C) Only II follows

(D) Neither I nor II follows

Q18. **Statement:** A bookstore puts up a notice: "Members get a 20% discount on every purchase."
Assumptions: I. Some customers of the bookstore are members. II. Discounts attract customers.
Which assumption(s) is/are implicit?

(A) Only I is implicit

(B) Neither I nor II is implicit

(C) Both I and II are implicit

(D) Only II is implicit

Q19. **Statement:** Should public libraries in the city stay open till midnight?
Arguments: I. Yes, working professionals and students would get

more time to study. II. No, keeping libraries open late wastes electricity and staff costs.
Which argument(s) is/are strong?

(A) Only I is strong

(B) Both I and II are strong

(C) Only II is strong

(D) Neither I nor II is strong

Q20. In a certain code: P@Q means P $\geq$ Q; P#Q means P $>$ Q; P\$Q means P $=$ Q; P%Q means P $<$ Q.
Given the statement A#B@C\$D, which of the following conclusions is definitely true?

(A) C#A (C $>$ A)

(B) B%D (B $<$ D)

(C) A\$D (A $=$ D)

(D) A#D (A $>$ D)

Q21. In a row of 40 students facing North, Rohan is 11th from the left end and Sahil is 9th from the right end. How many students sit between Rohan and Sahil?

(A) 21

(B) 18

(C) 22

(D) 20

Q22. If the 1st of March, 2027 is a Monday, then what day of the week will the 1st of April, 2027 be? (Note: 2027 is not a leap year.)

(A) Tuesday

(B) Wednesday

(C) Thursday

(D) Friday

Q23. Find the missing number that completes the pattern:

9	7	25
5	9	11
45	?	275

(Hint: every column follows the same rule.)

(A) 56

(B) 63

(C) 70

(D) 77

Q24. **Question:** What is the two-digit number?
Statement I: The sum of its digits is 9.
Statement II: The difference between the number and the number obtained by reversing its digits is 27.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Each statement alone is sufficient.

(D) Both statements together are still not sufficient.

Q25. **Question:** Among five friends J, K, L, M and N, who is the tallest?
Statement I: J is taller than K and M; N is shorter than M.
Statement II: L is taller than J; no one is taller than L.

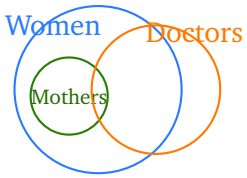
(A) Statement II alone is sufficient, but Statement I alone is not.

(B) Statement I alone is sufficient, but Statement II alone is not.

(C) Each statement alone is sufficient.

(D) Both statements together are not sufficient.

Q26. Which one of the following diagrams best represents the relationship among **Doctors**, **Women**, and **Mothers**?



(Some doctors are women; all mothers are women; some mothers are doctors; not all doctors are women.)

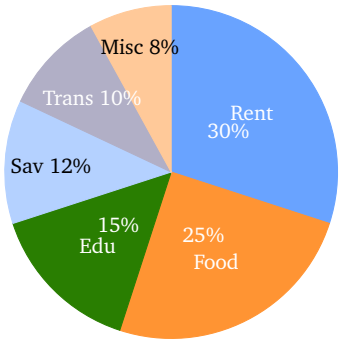
(A) Three mutually disjoint circles

(B) Mothers and Doctors fully inside Women, with no overlap between Mothers and Doctors

(C) Mothers wholly inside Women; Doctors partly inside Women (overlapping both)

(D) One single circle containing all three labels

Q27. **Directions (Q27–Q30):** The pie chart shows how the Verma household splits its total monthly income of **Rs. 60,000** across six heads. Study the chart and answer the questions that follow.



What is the amount (in rupees) that the household spends on **Rent** each month?

(A) Rs. 15,000

(B) Rs. 18,000

(C) Rs. 12,000

(D) Rs. 21,000

Q28. (Refer to the pie chart in Q27.) What is the ratio of the amount spent on **Food** to the amount spent on **Transport**?

(A) $3 : 1$

(B) $2 : 1$

(C) $5 : 3$

(D) $5 : 2$

Q29. (Refer to the pie chart in Q27.) The household decides to club **Education** and **Savings** together as "future planning". What total amount (in rupees) does this combined head represent?

(A) Rs. 16,200

(B) Rs. 15,000

(C) Rs. 18,000

(D) Rs. 13,800

Q30. (Refer to the pie chart in Q27.) What is the central angle (in degrees) of the sector representing **Food**?

(A) 108°

(B) 72°

(C) 90°

(D) 54°

Part II: Analytical Reasoning Skills

Q31. Find the next term in the series: $5,\ 11,\ 23,\ 47,\ 95,\ ?$

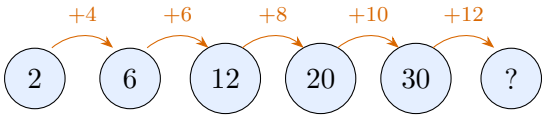
(A) 185

(B) 191

(C) 190

(D) 189

Q32. Find the next term in the series: 2, 6, 12, 20, 30, ?



(A) 40

(B) 36

(C) 44

(D) 42

Q33. 6 : 42 :: 8 :? (choose the term that bears the same relationship)

(A) 64

(B) 56

(C) 72

(D) 80

Q34. **Author** is related to **Novel** in the same way as **Composer** is related to:

(A) Symphony

(B) Orchestra

(C) Violin

(D) Audience

Q35. Three of the following four numbers are alike in a certain way and form a group. Which number does *not* belong to that group?

(A) 13

(B) 17

(C) 23

(D) 21

Q36. In a certain coded language, "bright moon glow" is written as "*sa re ga*", "moon is far" is written as "*re ni pa*", and "glow at night" is written as "*ga lo da*". What is the code for "moon"?

(A) *sa*

(B) *ga*

(C) *re*

(D) *pa*

Q37. In a certain code, "TIGER" is written as "VKIGT". Following the same rule, how is "LION" written?

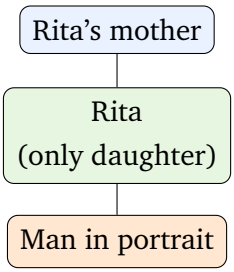
(A) NKPQ

(B) NKQP

(C) MKQP

(D) NJQP

Q38. Pointing to a man in a portrait, Rita said, "His mother is the only daughter of my mother." How is the man related to Rita?



(A) Son

(B) Brother

(C) Nephew

(D) Cousin

Q39. If P $+$ Q means "P is the father of Q", P $-$ Q means "P is the wife of Q", and P $\times$ Q means "P is the sister of Q", then which of the following shows that **P** is the paternal aunt of **T**?

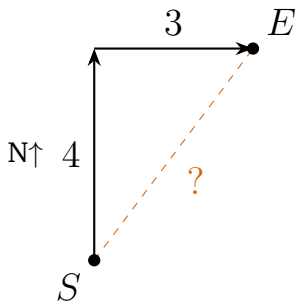
(A) P $+$ Q $\times$ T

(B) P $\times$ Q $+$ T

(C) P $-$ Q $+$ T

(D) P $\times$ Q $-$ T

Q40. A surveyor starts at point S, walks 4 km North to reach a marker, then turns and walks 3 km East to reach point E. What is the straight-line distance from S to E, and in which direction does E lie from S?



(A) 7 km, North

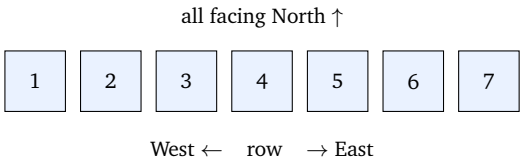
(B) 6 km, North-East

(C) 5 km, North-East

(D) 5 km, East

Q41. **Directions (Q41–Q43):** Seven persons — P, Q, R, S, T, U and V — sit in a single row, all *facing North*. (For a person facing North, the seat to their right lies to the East and the seat to their left lies to the West.) The known facts are: R sits at the extreme left end and Q sits at the extreme right end. There are exactly two persons to the right of S. P sits immediately to the right of R. U sits immediately to the left of S. T sits between

P and U. V sits between S and Q.



Who sits exactly in the middle of the row?

(A) T

(B) S

(C) P

(D) U

Q42. (Refer to the row seating in Q41.) Who sits third to the right of T?

(A) S

(B) V

(C) Q

(D) U

Q43. (Refer to the row seating in Q41.) How many persons sit between P and V?

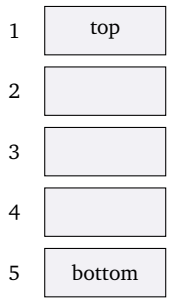
(A) 3

(B) 2

(C) 4

(D) 1

Q44. Directions (Q44–Q45): Five boxes — P, Q, R, S and T — are stacked one above another. T is at the bottom. There is exactly one box between S and T. Q is placed somewhere above R. P is placed immediately above Q.



Which box is at the top of the stack?

(A) S

(B) Q

(C) P

(D) R

Q45. (Refer to the box stack in Q44.) Which box is placed immediately below S?

(A) T

(B) Q

(C) P

(D) R

Q46. **Statements:** All cats are animals. No animal is a stone.
Conclusions: I. No cat is a stone. II. Some animals are cats.
Which conclusion(s) follow(s)?

(A) Both I and II follow

(B) Only I follows

(C) Only II follows

(D) Neither I nor II follows

Q47. **Statements:** Some books are pens. All pens are red.
Conclusions: I. Some books are red. II. All books are red.
Which conclusion(s) follow(s)?

(A) Both I and II follow

(B) Only I follows

(C) Only II follows

(D) Neither I nor II follows

Q48. **Statement:** Many students failed the final examination because the prescribed syllabus was far too long to be completed in time.
Courses of action: I. The syllabus should be reviewed and rationalised by the board. II. All students who failed should be permanently expelled from the institute.
Which course(s) of action logically follow(s)?

(A) Both I and II follow

(B) Only II follows

(C) Only I follows

(D) Neither I nor II follows

Q49. **Statement:** "Notice: The last date to submit the scholarship application form is 30 June."
Conclusions: I. Forms submitted after 30 June may not be accepted. II. Some students are expected to apply for the scholarship.
Which conclusion(s) follow(s)?

(A) Only I follows

(B) Only II follows

(C) Neither follows

(D) Both I and II follow

Q50. In a certain code: P▲Q means $P \geq Q$; P■Q means $P > Q$; P • Q means $P = Q$; P♦Q means $P < Q$.
Given the statement A■B▲C • D, which of the following conclusions is definitely true?

(A) D■A $(D > A)$

(B) A■D (A > D)

(C) B • D (B = D)

(D) C■B (C > B)

Q51. In a row of 35 people facing North, M is 13th from the left end and N is 17th from the right end. How many people sit between M and N?

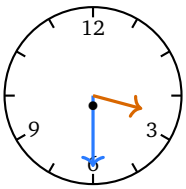
(A) 5

(B) 4

(C) 6

(D) 7

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



(A) 90°

(B) 65°

(C) 75°

(D) 80°

Q53. Find the missing number that completes the pattern (each row follows the same rule):

4	5	24
3	6	21
5	3	?

(A) 15

(B) 18

(C) 25

(D) 20

Q54. **Question:** Is X older than Y?
Statement I: X is 5 years older than Z.
Statement II: Z is 3 years younger than Y.

(A) Statement I alone is sufficient, but Statement II alone is not.

(B) Statement II alone is sufficient, but Statement I alone is not.

(C) Both statements together are sufficient, but neither alone is sufficient.

(D) Each statement alone is sufficient.

Q55. **Question:** How is P related to Q?
Statement I: P is the son of Q's father.
Statement II: Q is the only daughter of P's father.

(A) Each statement alone is sufficient.

(B) Statement I alone is sufficient, but Statement II alone is not.

(C) Both statements together are needed.

(D) Both statements together are still not sufficient.

Q56. Which one of the following best represents the relationship among **Pencils**, **Stationery**, and **Tables**?

(All pencils are stationery; tables are neither pencils nor stationery.)

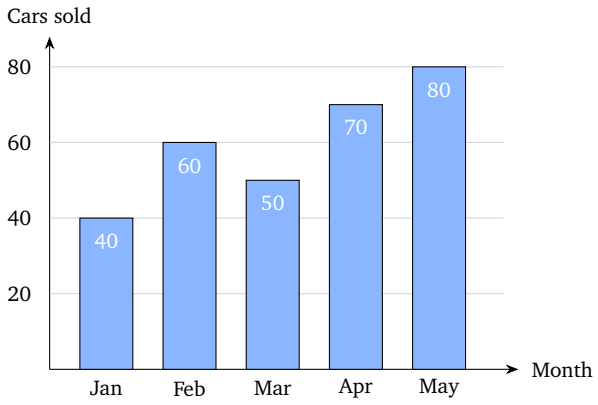
(A) Three mutually overlapping circles

(B) Pencils wholly inside Stationery, with Tables a separate disjoint circle

(C) All three circles one inside another

(D) Tables inside Stationery, Pencils separate

Q57. **Directions (Q57–Q60):** The bar chart shows the number of cars sold by a dealership over five months. Study the chart and answer the questions that follow.



What is the total number of cars sold over the five months?

(A) 280

(B) 320

(C) 290

(D) 300

Q58. (Refer to the bar chart in Q57.) In which month was the number of cars sold the highest?

(A) April

(B) February

(C) May

(D) March

Q59. (Refer to the bar chart in Q57.) What is the percentage increase in the number of cars sold from January to February?

(A) 50%

(B) 20%

(C) 40%

(D) $33\frac{1}{3}\%$

Q60. (Refer to the bar chart in Q57.) What is the average number of cars sold per month over the five months?

(A) 50

(B) 60

(C) 65

(D) 55

Detailed Solutions

Q1.

Solution

Concept — Number series ($\times 2$ then add): Look at how each term grows compared with the previous one.

Step 1 — Test "double and add 1": $3 \times 2 + 1 = 7$.

Step 2 — Continue the rule: $7 \times 2 + 2 = 16$.

Step 3 — Confirm the increment: $16 \times 2 + 3 = 35$; $35 \times 2 + 4 = 74$.

Step 4 — Apply to find the next term: $74 \times 2 + 5 = 148 + 5 = 153$.

Why other options are wrong:

- 148: this is only 74×2, forgetting to add 5.
- 135 and 162: do not fit the "double then add a growing constant" rule.

Final Answer: $74 \times 2 + 5 = 153 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q1

Q2.

Solution

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

Step 1 — Positions: $\text{C} = 3,\ \text{F} = 6,\ \text{K} = 11,\ \text{R} = 18$.

Step 2 — Differences: $6 - 3 = 3,\ 11 - 6 = 5,\ 18 - 11 = 7$. The gaps are $3, 5, 7$ (odd numbers increasing by 2).

Step 3 — Next gap: the next odd gap is 9, so the next position is $18 + 9 = 27$.

Step 4 — Convert back: position 27 wraps past 26 (Z); $27 - 26 = 1 \Rightarrow$ letter A.

Why other options are wrong:

- Y (25) and Z (26): would need gaps of 7 or 8, not 9.
- B $(28 \rightarrow 2)$: that is one step too far.

Final Answer: position $27 \Rightarrow$ letter A $\Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q2

Q3.

Solution

Concept — Number analogy ($n^2 + n$): Find the rule linking 7 to 56, then apply it to 9.

Step 1 — Spot the rule: $7 \times 8 = 56$, i.e. $n \times (n+1) = n^2 + n$. Check: $7^2 + 7 = 49 + 7 = 56$. ✓

Step 2 — Apply to 9: $9 \times 10 = 90$, i.e. $9^2 + 9 = 81 + 9 = 90$.

Why other options are wrong:

- $81 = 9^2$: forgets the "$+n$" part.
- $72 = 9 \times 8$: uses $(n-1)$ instead of $(n+1)$.
- $99 = 9 \times 11$: jumps two steps ahead.

Final Answer: $9 \times 10 = 90 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Word analogy (object : body part it covers): A glove is worn on the hand; identify what a sock is worn on.

Step 1 — Relationship: Glove covers the Hand.

Step 2 — Apply: A sock covers the Foot. So Sock : Foot.

Why other options are wrong:

- Shoe: also worn on the foot, but it is footwear, not the body part covered.
- Wool: a material a sock may be made of, not the part it covers.
- Knee: a sock reaches the foot, not specifically the knee.

Final Answer: Sock : Foot $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Classification ("one more than a perfect square"): Subtract 1 from each number and check whether the result is a perfect square.

Step 1 — Test the group:

- $50 - 1 = 49 = 7^2$. ✓
- $65 - 1 = 64 = 8^2$. ✓
- $101 - 1 = 100 = 10^2$. ✓

So $50, 65, 101$ are each of the form $n^2 + 1$.

Step 2 — Test the remaining number: $48 - 1 = 47$, which is *not* a perfect square ($6^2 = 36$, $7^2 = 49$).

Step 3 — Conclusion: 48 breaks the "$n^2 + 1$" rule, so it is the odd one out.

Final Answer: 48 does not belong $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q5

Q6.

Solution

Concept — Language coding (match common words across lines): A word shared by two sentences must map to a code shared by their code-groups.

Step 1 — List the data:

- "sun rises east" = *pa lo mi*
- "east is red" = *mi ka tu*
- "red sun glows" = *tu pa ne*

Step 2 — "east" is common to lines 1 and 2: shared code between {pa,lo,mi} and {mi,ka,tu} is *mi*. So east = *mi*.

Step 3 — "red" is common to lines 2 and 3: shared code between {mi,ka,tu} and {tu,pa,ne} is *tu*. So red = *tu*.

Step 4 — "sun" is common to lines 1 and 3: shared code between {pa,lo,mi} and {tu,pa,ne} is *pa*. So sun = *pa*.

Final Answer: sun = *pa* $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q6

Q7.

Solution

Concept — Language coding (continue Q6 deductions): We already mapped the common words.

Step 1 — Recall from Q6: east $=$ *mi*, sun $=$ *pa*.

Step 2 — Find "red": "red" appears in line 2 (*mi ka tu*) and line 3 (*tu pa ne*). The only code common to both groups is *tu*.

Step 3 — Conclusion: red $=$ *tu*.

Why other options are wrong:

- *pa* $=$ sun; *mi* $=$ east; *ne* is left over for "glows".

Final Answer: red $=$ *tu* $\Rightarrow$ B

Answer: (B) Go Back to Q7

Q8.

Solution

Concept — Blood relations (trace the chain): "The only daughter of my grandfather" is Meera's own mother.

Step 1 — Identify the daughter: The only daughter of Meera's grandfather is Meera's mother.

Step 2 — Identify the man: The man is "the son of" that daughter, i.e. the son of Meera's mother.

Step 3 — Relation to Meera: The son of Meera's mother is Meera's brother.

Why other options are wrong:

- Uncle/Nephew/Cousin would require the man to belong to a different sibling-line; here he shares Meera's own mother.

Final Answer: He is Meera's brother $\Rightarrow$ D

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Coded relations: Decode each option left to right using the given symbols.

Step 1 — Recall the symbols: $+$ mother, $-$ brother, $\times$ father.

Step 2 — Test option A, M $-$ N $+$ T:

- M $-$ N: M is the brother of N.
- N $+$ T: N is the mother of T.

So N is the mother of T, and M is N's brother $\Rightarrow$ M is the maternal uncle of T. ✓

Step 3 — Why the others fail:

- M $+$ N $-$ T: M is N's mother $\Rightarrow$ M is female, cannot be "uncle".
- M $\times$ N $-$ T: M is N's father, not an uncle of T.
- M $-$ N $\times$ T: N is T's father, so M is T's *paternal* uncle.

Final Answer: M $-$ N $+$ T $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Direction sense (net displacement): Adding equal North and South legs cancels the vertical movement.

Step 1 — North then South: 6 km North followed by 6 km South cancel out, leaving net North-South displacement $= 0$.

Step 2 — Remaining movement: Only the 8 km East leg remains.

Step 3 — Position of E: E is 8 km due East of S and on the same horizontal level.

Why other options are wrong:

- 14 km East: wrongly adds the 6 km legs to the 8 km.
- 10 km North-East: that would be the diagonal if the legs did not cancel.

Final Answer: 8 km, East $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q10

Q11.

Solution

Concept — Circular seating, all facing centre: For a person facing the centre, "left" means clockwise and "right" means anticlockwise. Fix one person, then place the rest using the clues.

Step 1 — Anchor E and place its neighbours: "G is immediately to the right of E" (anticlockwise neighbour) and "C is an immediate neighbour of both E and F", so on E's other (clockwise) side we get the block G | E | C | F reading clockwise.

Step 2 — Place A and H: "A is third to the left of E": counting clockwise from E three seats (E $\to$ C $\to$ F $\to$ A) puts A there. "H is immediately to the left of A" puts H clockwise-adjacent to A.

Step 3 — Place D and B: "D sits exactly between B and H" fills the remaining seats, giving the full clockwise order:

$$\text{A} \to \text{H} \to \text{D} \to \text{B} \to \text{G} \to \text{E} \to \text{C} \to \text{F} \to (\text{back to A}).$$

Step 4 — Second to the left of B: left $=$ clockwise. From B, clockwise: G (1st), E (2nd). So E sits second to the left of B.

Final Answer: $\boxed{\text{B}}$ (E)

Answer: (B) Go Back to Q11

Q12.

Solution

Concept — Diametrically opposite in an 8-seat circle: Two people sit opposite when exactly 4 seats separate them.

Step 1 — Use the clockwise order from Q11:

$$\text{A},\ \text{H},\ \text{D},\ \text{B},\ \text{G},\ \text{E},\ \text{C},\ \text{F}.$$

Step 2 — Pair each person with the one 4 seats away:

- A $\leftrightarrow$ G, H $\leftrightarrow$ E, D $\leftrightarrow$ C, B $\leftrightarrow$ F.

Step 3 — Match the options: Among the choices, only "A and G" appears in the opposite-pairs list.

Final Answer: A and G sit opposite $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Counting to the left (clockwise) for centre-facing people: "Left" moves in the clockwise direction.

Step 1 — Clockwise order from Q11:

$$\text{A, H, D, B, G, E, C, F.}$$

Step 2 — Count three to the left of D: clockwise from D: B (1st), G (2nd), E (3rd).

Step 3 — Conclusion: E sits third to the left of D.

Final Answer: $\boxed{\text{A}}$ (E)

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Floor puzzle (place fixed clues first): Floors 1 (bottom) to 5 (top).

Step 1 — Sens on top: Sens $=$ floor 5.

Step 2 — Roys immediately above Khans: possible (Khan, Roy) pairs are $(1,2),(2,3),(3,4)$ since floor 5 is taken.

Step 3 — Exactly two floors separate Roys and Patels: "two floors separate" means a gap of 3 (e.g. floors 1 and 4). Test (Khan 1, Roy 2): Patel would be floor 5 (taken) — reject. Test (Khan 2, Roy 3): Patel at floor 6 (none) or floor 0 (none) — reject. Test (Khan 3, Roy 4): Patel at floor 1 (gap $4-1=3$, two floors between). ✓

Step 4 — Fill remaining: Khan 3, Roy 4, Sen 5, Patel 1. The only floor left is 2, for the Iyers — and 2 is even, satisfying "Iyers on an even floor". ✓

Final Answer: Iyers live on Floor $2 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q14

Q15.

Solution

Concept — Ranking from inequalities: Combine the comparisons into one chain.

Step 1 — Translate each clue:

- Anita $>$ Bharat, Anita $<$ Chetan $\Rightarrow$ Bharat $<$ Anita $<$ Chetan.
- Divya $>$ Chetan.
- Esha $<$ Bharat.

Step 2 — Build the full order (highest first):

$$\text{Divya} > \text{Chetan} > \text{Anita} > \text{Bharat} > \text{Esha}.$$

Step 3 — Read off rank 2: Second highest is Chetan.

Final Answer: Chetan stands second $\Rightarrow$ $\boxed{\text{B}}$

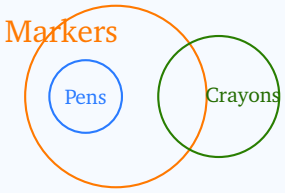
Answer: (B) Go Back to Q15

Q16.

Solution

Concept — Syllogism (Venn check): "All pens are markers" puts Pens fully inside Markers; "Some markers are crayons" overlaps Markers with Crayons.

Step 1 — Draw the Venn:



Step 2 — Conclusion I (Some pens are crayons): Pens sit on the far side of Markers from the Crayon overlap, so they *need not* touch Crayons. Not necessarily true.

Step 3 — Conclusion II (Some crayons are markers): "Some markers are crayons" is symmetric, so "some crayons are markers" is guaranteed true.

Final Answer: Only II follows $\Rightarrow$ $\boxed{\text{D}}$

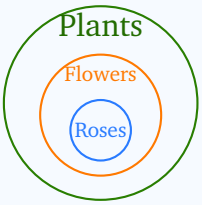
Answer: (D) Go Back to Q16

Q17.

Solution

Concept — Syllogism (chained "all"): "All roses are flowers" and "all flowers are plants" nest the circles.

Step 1 — Draw the Venn:



Step 2 — Conclusion I (All roses are plants): Roses $\subseteq$ Flowers $\subseteq$ Plants, so every rose is a plant. True.

Step 3 — Conclusion II (Some plants are roses): Since roses exist and all are plants, at least some plants are roses. True.

Final Answer: Both I and II follow $\Rightarrow$ A

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Statement & assumption: An assumption is something taken for granted that must hold for the statement to make sense.

Step 1 — Assumption I: Offering members a discount implies the store has (or expects) members — otherwise the notice is pointless. Implicit. ✓

Step 2 — Assumption II: The store advertises a discount in order to attract customers, so it assumes discounts do attract customers. Implicit. ✓

Step 3 — Combine: Both assumptions underlie the notice.

Final Answer: Both I and II are implicit $\Rightarrow$ C

Answer: (C) Go Back to Q18

Q19.

Solution

Concept — Statement & argument (strong vs weak): A strong argument is directly relevant and weighty; a weak one is trivial or tangential.

Step 1 — Argument I: "Working professionals and students would get more study time" addresses a real, substantial benefit tied to the proposal. Strong. ✓

Step 2 — Argument II: "Wastes electricity and staff costs" is a minor administrative concern that does not outweigh the educational benefit and applies to almost any extended service. Weak.

Step 3 — Conclusion: Only argument I is strong.

Final Answer: Only I is strong $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q19

Q20.

Solution

Concept — Coded inequalities: Replace each symbol and read the chain.

Step 1 — Decode the statement A#B@C$D:

$$A > B \geq C = D.$$

Step 2 — Combine across C = D: Since $B \geq C$ and $C = D$, we get $B \geq D$. Also $A > B \geq D$, so $A > D$.

Step 3 — Test the conclusions:

- $A > D$: follows directly. ✓
- $C > A$: false, since $A > B \geq C$.
- $B < D$: false, we have $B \geq D$.
- $A = D$: false, we have a strict $A > D$.

Final Answer: $A > D$ is definitely true $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q20

Q21.

Solution

Concept — Position in a row: Convert Sahil's right-position to a left-position, then count the gap.

Step 1 — Total students: 40.

Step 2 — Sahil from the left: 9th from the right $\Rightarrow$ position $40 - 9 + 1 = 32$ from the left.

Step 3 — Rohan from the left: 11th from the left.

Step 4 — Students between them: $32 - 11 - 1 = 20$.

Final Answer: 20 students sit between them $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q21

Q22.

Solution

Concept — Calendar (odd days): March has 31 days; the day of the week advances by the remainder of $31 \div 7$.

Step 1 — Odd days in March: $31 = 4 \times 7 + 3$, so 3 odd days.

Step 2 — Advance from 1 March: 1 March is a Monday. Moving 31 days lands on 1 April, which is 3 weekdays after Monday.

Step 3 — Count forward: Monday $+3$ = Tuesday $\rightarrow$ Wednesday $\rightarrow$ Thursday.

Final Answer: 1 April 2027 is a Thursday $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q22

Q23.

Solution

Concept — Column rule in a number grid: In each column, the bottom number is the product of the top two.

Step 1 — Test column 1 $(9, 5, 45)$: $9 \times 5 = 45$. ✓

Step 2 — Test column 3 $(25, 11, 275)$: $25 \times 11 = 275$. ✓So the rule is row3 = row1$\times$ row2.

Step 3 — Apply to column 2 $(7, 9, ?)$: $7 \times 9 = 63$.

Why other options are wrong:

- $56 = 7 \times 8$ and $77 = 7 \times 11$ use the wrong second factor; $70 = 7 \times 10$ likewise. Only $7 \times 9 = 63$ fits.

Final Answer: $7 \times 9 = 63 \Rightarrow$ B

Answer: (B) Go Back to Q23

Q24.

Solution

Concept — Data sufficiency (two-digit number): Let the number be $10x + y$.

Step 1 — Statement I ($x + y = 9$): Many numbers qualify $(18, 27, 36, \ldots)$. Not sufficient alone.

Step 2 — Statement II: $(10x + y) - (10y + x) = 9(x - y) = 27 \Rightarrow x - y = 3$. Many numbers qualify $(41, 52, 63, \ldots)$. Not sufficient alone.

Step 3 — Both together: $x + y = 9$ and $x - y = 3 \Rightarrow x = 6, y = 3$, giving 63. *But* $x - y = 3$ from statement II only guarantees the difference of 27 when the original number is larger; if instead the reversed number were larger, the difference would still give $|x - y| = 3$, allowing 36 as well $(x = 3, y = 6)$. With $x + y = 9$ and $|x - y| = 3$, two numbers fit: 63 and 36. So even together the number is not uniquely fixed.

Step 4 — Conclusion: Both statements together are still not sufficient.

Final Answer: D

Answer: (D) Go Back to Q24

Q25.

Solution

Concept — Data sufficiency (find the tallest): We need a statement that names someone taller than everyone else.

Step 1 — Statement I: J > K, J > M, N < M. This ranks J above K, M, N — but says nothing about L. L could be taller than J. Not sufficient.

Step 2 — Statement II: L > J and "no one is taller than L". This directly states L is the tallest. Sufficient alone. ✓

Step 3 — Conclusion: Statement II alone settles it; Statement I alone does not.

Final Answer: Statement II alone is sufficient $\Rightarrow$ A

Answer: (A) Go Back to Q25

Q26.

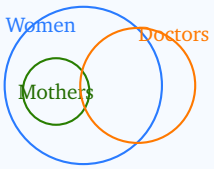
Solution

Concept — Logical Venn (class relationships): Translate each real-world relation into circle placement.

Step 1 — All mothers are women: the Mothers circle lies entirely inside the Women circle.

Step 2 — Some doctors are women, some are not: the Doctors circle partly overlaps Women (and the Mothers region), but extends outside Women too (male doctors exist).

Step 3 — Match to the options:



Mothers wholly inside Women; Doctors partly inside Women (overlapping). This is option C.

Final Answer: C

Answer: (C) Go Back to Q26

Q27.

Solution

Concept — Pie chart (percentage of total): Amount = percentage $\times$ total income.

Step 1 — Read the Rent share: Rent $= 30\%$.

Step 2 — Compute the amount: 30% of Rs. $60{,}000 = \dfrac{30}{100} \times 60{,}000 = 18{,}000$.

Why other options are wrong:

- Rs. $15{,}000 = 25\%$ (Food share). Rs. $12{,}000 = 20\%$. Rs. $21{,}000 = 35\%$. None match 30%.

Final Answer: Rent $=$ Rs. $18{,}000 \Rightarrow$ B

Answer: (B) Go Back to Q27

Q28.

Solution

Concept — Pie chart (ratio of two shares): A ratio of amounts equals the ratio of their percentages.

Step 1 — Read the shares: Food $= 25\%$, Transport $= 10\%$.

Step 2 — Form the ratio: $\frac{25}{10} = \frac{5}{2}$, i.e. $5 : 2$.

Step 3 — Cross-check with amounts: Food $= 25\% \times 60{,}000 = 15{,}000$; Transport $= 10\% \times 60{,}000 = 6{,}000$; $15{,}000 : 6{,}000 = 5 : 2$. ✓

Final Answer: $5 : 2 \Rightarrow$ D

Answer: (D) Go Back to Q28

Q29.

Solution

Concept — Pie chart (combine two heads): Add the two percentages, then take that share of the total.

Step 1 — Read the shares: Education $= 15\%$, Savings $= 12\%$.

Step 2 — Combined percentage: $15\% + 12\% = 27\%$.

Step 3 — Combined amount: 27% of Rs. $60{,}000 = \frac{27}{100} \times 60{,}000 = 16{,}200$.

Why other options are wrong:

- Rs. $15{,}000 = 25\%$; Rs. $18{,}000 = 30\%$; Rs. $13{,}800 = 23\%$. None equal 27%.

Final Answer: Combined head $=$ Rs. $16{,}200 \Rightarrow$ A

Answer: (A) Go Back to Q29

Q30.

Solution

Concept — Pie chart (central angle): A full pie is $360°$, so a sector's angle $= \frac{\text{percentage}}{100} \times 360°$.

Step 1 — Read the Food share: Food $= 25\%$.

Step 2 — Convert to an angle: $\frac{25}{100} \times 360° = \frac{1}{4} \times 360° = 90°$.

Why other options are wrong:

- $108° = 30\%$ (Rent); $72° = 20\%$; $54° = 15\%$ (Education). None match 25%.

Final Answer: Food sector $= 90° \Rightarrow$ C

Answer: (C) Go Back to Q30

Q31.

Solution

Concept — Number series ($\times 2 + 1$): Each term is just over double the previous one.

Step 1 — Test "double and add 1": $5 \times 2 + 1 = 11$.

Step 2 — Continue: $11 \times 2 + 1 = 23$.

Step 3 — Confirm: $23 \times 2 + 1 = 47$; $47 \times 2 + 1 = 95$.

Step 4 — Next term: $95 \times 2 + 1 = 190 + 1 = 191$.

Why other options are wrong:

- $190 = 95 \times 2$ forgets the "$+1$"; 185 and 189 do not fit the rule.

Final Answer: $95 \times 2 + 1 = 191 \Rightarrow$ B

Answer: (B) Go Back to Q31

Q32.

Solution

Concept — Series with growing even differences: Look at the gap between consecutive terms.

Step 1 — Differences: $6-2=4,\ 12-6=6,\ 20-12=8,\ 30-20=10$. The gaps are $4, 6, 8, 10$ (even numbers increasing by 2).

Step 2 — Next gap: the next even gap is 12.

Step 3 — Apply: $30+12=42$.

Alternative check: the terms are $n(n+1)$: $1\cdot 2=2$, $2\cdot 3=6$, $3\cdot 4=12$, $4\cdot 5=20$, $5\cdot 6=30$, $6\cdot 7=42$. ✓

Final Answer: $30+12=42 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q32

Q33.

Solution

Concept — Number analogy (n^2-n): Find the rule linking 6 to 42, then apply it to 8.

Step 1 — Spot the rule: $6\times 7=42$, i.e. $n\times(n+1)$. Check: $6^2+6=36+6=42$. ✓

Step 2 — Apply to 8: $8\times 9=72$, i.e. $8^2+8=64+8=72$.

Why other options are wrong:

- $64=8^2$ forgets the "$+n$"; $56=8\times 7$ uses $(n-1)$; $80=8\times 10$ jumps a step.

Final Answer: $8\times 9=72 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q33

Q34.

Solution

Concept — Word analogy (creator : work created): An author creates a novel; identify what a composer creates.

Step 1 — Relationship: Author produces a Novel (the finished creative work).

Step 2 — Apply: A composer produces a Symphony (the finished musical work). So Composer : Symphony.

Why other options are wrong:

- Orchestra: who performs the work, not what the composer creates.
- Violin: an instrument used, not the created work.
- Audience: who listens, not the work.

Final Answer: Composer : Symphony $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q34

Q35.

Solution

Concept — Classification (prime numbers): Check which numbers are prime.

Step 1 — Test each:

- 13: prime. ✓
- 17: prime. ✓
- 23: prime. ✓
- $21 = 3 \times 7$: *not* prime.

Step 2 — Conclusion: $13, 17, 23$ are all prime; 21 is composite, so it is the odd one out.

Final Answer: 21 does not belong $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q35

Q36.

Solution

Concept — Language coding (match common words): A word shared by two sentences maps to the code shared by their groups.

Step 1 — List the data:

- "bright moon glow" = *sa re ga*
- "moon is far" = *re ni pa*
- "glow at night" = *ga lo da*

Step 2 — "moon" is common to lines 1 and 2: shared code between {sa,re,ga} and {re,ni,pa} is *re*. So moon = *re*.

Step 3 — Cross-check "glow": common to lines 1 and 3 is *ga*; that leaves *sa* = bright. Consistent.

Final Answer: moon = *re* $\Rightarrow$ C

Answer: (C) Go Back to Q36

Q37.

Solution

Concept — Letter-shift coding (+2 each): Find how TIGER becomes VKIGT, then apply to LION.

Step 1 — Compare TIGER → VKIGT:

- T(20) →V(22), I(9) →K(11), G(7) →I(9), E(5) →G(7), R(18) →T(20).

Every letter moves +2 in the alphabet.

Step 2 — Apply +2 to LION:

- L(12) →N(14), I(9) →K(11), O(15) →Q(17), N(14) →P(16).

Step 3 — Read off: LION → NKQP.

Final Answer: NKQP $\Rightarrow$ B

Answer: (B) Go Back to Q37

Q38.

Solution

Concept — Blood relations (trace the chain): "The only daughter of my mother" is Rita herself.

Step 1 — Identify the daughter: The only daughter of Rita's mother is Rita.

Step 2 — Use the clue: The man's mother is that only daughter, i.e. the man's mother is Rita.

Step 3 — Relation to Rita: If Rita is the man's mother, the man is Rita's son.

Why other options are wrong:

- Brother/Nephew/Cousin would require the man's mother to be someone other than Rita.

Final Answer: The man is Rita's son $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q38

Q39.

Solution

Concept — Coded relations: Decode each option using $+$ father, $-$ wife, $\times$ sister.

Step 1 — Required relation: P is the paternal aunt of T means P is the sister of T's father.

Step 2 — Test option B, P $\times$ Q $+$ T:

- P $\times$ Q: P is the sister of Q.
- Q $+$ T: Q is the father of T.

So Q is T's father and P is Q's sister $\Rightarrow$ P is T's paternal aunt. ✓

Step 3 — Why the others fail:

- P $+$ Q $\times$ T: P is Q's father $\Rightarrow$ P is male, cannot be "aunt".
- P $-$ Q $+$ T: P is Q's wife, then Q is T's father $\Rightarrow$ P is T's mother, not aunt.
- P $\times$ Q $-$ T: Q is T's wife, so P is sister of T's wife (sister-in-law line), not paternal aunt.

Final Answer: P $\times$ Q $+$ T $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q39

Q40.

Solution

Concept — Direction sense (3-4-5 right triangle): The North and East legs form the two legs of a right triangle; the displacement is the hypotenuse.

Step 1 — Legs: 4 km North and 3 km East are perpendicular.

Step 2 — Hypotenuse: distance $= \sqrt{4^2 + 3^2} = \sqrt{16 + 9} = \sqrt{25} = 5$ km.

Step 3 — Direction: E lies North and East of S, so the direction is North-East.

Why other options are wrong:

- 7 km wrongly adds the legs; 6 km is not a valid hypotenuse; "East" ignores the North component.

Final Answer: 5 km, North-East $\Rightarrow$ C

Answer: (C) Go Back to Q40

Q41.

Solution

Concept — Linear seating (place fixed ends first): Number the seats 1 (extreme left/West) to 7 (extreme right/East).

Step 1 — Ends: R at seat 1, Q at seat 7.

Step 2 — Place S: "exactly two persons to the right of S" means seats 6 and 7 are to S's right, so S is at seat 5.

Step 3 — Place P and U: P immediately right of R $\Rightarrow$ P at seat 2. U immediately left of S $\Rightarrow$ U at seat 4.

Step 4 — Place T and V: T between P(2) and U(4) $\Rightarrow$ T at seat 3. V between S(5) and Q(7) $\Rightarrow$ V at seat 6. Full order:

$$\underbrace{\text{R}}_{1}\ \underbrace{\text{P}}_{2}\ \underbrace{\text{T}}_{3}\ \underbrace{\text{U}}_{4}\ \underbrace{\text{S}}_{5}\ \underbrace{\text{V}}_{6}\ \underbrace{\text{Q}}_{7}.$$

Step 5 — Middle seat: the middle of 7 seats is seat 4, which is U.

Final Answer: U sits in the middle $\Rightarrow$ D

Answer: (D) Go Back to Q41

Q42.

Solution

Concept — Right means East for North-facing people: "Third to the right" moves three seats towards higher seat numbers.

Step 1 — Order from Q41:

$$R_1,\ P_2,\ T_3,\ U_4,\ S_5,\ V_6,\ Q_7.$$

Step 2 — Count three to the right of T(3): seat 4 (U), seat 5 (S), seat 6 (V).

Step 3 — Conclusion: the third seat is 6, which is V.

Final Answer: V $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q42

Q43.

Solution

Concept — Count persons strictly between two seats: Subtract the seat numbers and remove the endpoints.

Step 1 — Locate P and V: P at seat 2, V at seat 6.

Step 2 — Persons between: seats $3, 4, 5$ lie strictly between, i.e. T, U and S.

Step 3 — Count: that is $6 - 2 - 1 = 3$ persons.

Final Answer: 3 persons sit between P and V $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q43

Q44.

Solution

Concept — Stacking puzzle (fix the anchors): Number positions 1 (bottom) to 5 (top).

Step 1 — T at the bottom: T $=$ position 1.

Step 2 — One box between S and T: a single box separates them, so S is at position 3.

Step 3 — Place P, Q, R in the remaining positions $2, 4, 5$: we need "P immediately above Q" and "Q above R". The only way is R $= 2$, Q $= 4$, P $= 5$ (P sits just

above Q, and Q is above R). Full stack, top to bottom:

$$P_5,\ Q_4,\ S_3,\ R_2,\ T_1.$$

Step 4 — Top box: position 5 is P.

Final Answer: P is at the top $\Rightarrow$ $\boxed{C}$

Answer: (C) Go Back to Q44

Q45.

Solution

Concept — Read the stack built in Q44: Use the established order.

Step 1 — Stack (top to bottom):

$$P_5,\ Q_4,\ S_3,\ R_2,\ T_1.$$

Step 2 — Box immediately below S(3): position 2, which is R.

Final Answer: R is immediately below S $\Rightarrow$ $\boxed{D}$

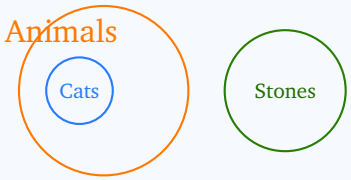
Answer: (D) Go Back to Q45

Q46.

Solution

Concept — Syllogism (Venn check): "All cats are animals" nests Cats inside Animals; "No animal is a stone" separates Animals from Stones.

Step 1 — Draw the Venn:



Step 2 — Conclusion I (No cat is a stone): Cats $\subseteq$ Animals and Animals are wholly apart from Stones, so no cat can be a stone. True.

Step 3 — Conclusion II (Some animals are cats): Cats exist and all are animals, so at least some animals are cats. True.

Final Answer: Both I and II follow $\Rightarrow$ $\boxed{A}$

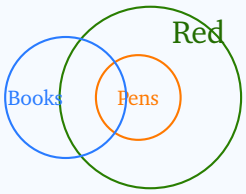
Answer: (A) Go Back to Q46

Q47.

Solution

Concept — Syllogism (some + all): "Some books are pens" overlaps Books and Pens; "All pens are red" nests Pens inside Red.

Step 1 — Draw the Venn:



Step 2 — Conclusion I (Some books are red): The books that are pens lie inside Pens, hence inside Red, so some books are red. True.

Step 3 — Conclusion II (All books are red): Only the overlapping books are forced to be red; the rest of Books may lie outside Red. Not necessarily true.

Final Answer: Only I follows $\Rightarrow$ B

Answer: (B) Go Back to Q47

Q48.

Solution

Concept — Statement & course of action: A valid course of action directly addresses the problem and is reasonable.

Step 1 — Course I: Reviewing and rationalising the over-long syllabus tackles the stated cause of failure. Reasonable and relevant. Follows. ✓

Step 2 — Course II: Permanently expelling all who failed is excessive, unjust, and ignores the cause (the long syllabus). Does not follow.

Step 3 — Conclusion: Only course of action I follows.

Final Answer: Only I follows $\Rightarrow$ C

Answer: (C) Go Back to Q48

Q49.

Solution

Concept — Statement & conclusion: A conclusion follows if it is a reasonable inference from the notice.

Step 1 — Conclusion I: If 30 June is the last date, forms after it may well be rejected. This is the natural meaning of a deadline. Follows. ✓

Step 2 — Conclusion II: A scholarship notice is issued because some students are expected to apply; otherwise there would be no point publishing it. Follows. ✓

Step 3 — Conclusion: Both conclusions follow.

Final Answer: Both I and II follow $\Rightarrow$ D

Answer: (D) Go Back to Q49

Q50.

Solution

Concept — Coded inequalities: Replace each symbol and read the chain.

Step 1 — Decode A■B▲C • D:

$$A > B \geq C = D.$$

Step 2 — Combine: Since $B \geq C$ and $C = D$, we get $B \geq D$. With $A > B \geq D$, it follows that $A > D$.

Step 3 — Test the conclusions:

- $A > D$: follows directly. ✓
- $D > A$: false (opposite).
- $B = D$: not forced ($B \geq D$ allows $B > D$).
- $C > B$: false, since $B \geq C$.

Final Answer: $A > D$ is definitely true $\Rightarrow$ B

Answer: (B) Go Back to Q50

Q51.

Solution

Concept — Position in a row: Convert N's right-position to a left-position, then count the gap.

Step 1 — Total people: 35.

Step 2 — N from the left: 17th from the right $\Rightarrow$ position $35 - 17 + 1 = 19$ from the left.

Step 3 — M from the left: 13th from the left.

Step 4 — People between them: $19 - 13 - 1 = 5$.

Final Answer: 5 people sit between M and N $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q51

Q52.

Solution

Concept — Clock angle: The minute hand moves 6° per minute; the hour hand moves 0.5° per minute (i.e. 30° per hour).

Step 1 — Minute-hand angle at 30 min: $30 \times 6 = 180^\circ$ (measured clockwise from 12).

Step 2 — Hour-hand angle at $3{:}30$: at 3 o'clock it is at $3 \times 30 = 90^\circ$; in 30 minutes it advances $30 \times 0.5 = 15^\circ$, reaching $90 + 15 = 105^\circ$.

Step 3 — Difference: $180^\circ - 105^\circ = 75^\circ$. This is already the smaller angle (less than 180°).

Final Answer: the angle is 75° $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q52

Q53.

Solution

Concept — Row rule in a number grid: In each row, third entry $=$ (first $\times$ second) $+$ first.

Step 1 — Test row 1 $(4, 5, 24)$: $4 \times 5 + 4 = 20 + 4 = 24$. ✓

Step 2 — Test row 2 $(3, 6, 21)$: $3 \times 6 + 3 = 18 + 3 = 21$. ✓So the rule is third $=$ first $\times$ second $+$ first.

Step 3 — Apply to row 3 $(5, 3, ?)$: $5 \times 3 + 5 = 15 + 5 = 20$.

Why other options are wrong:

- $15 = 5 \times 3$ forgets the "+ first"; 18 and 25 do not fit the rule.

Final Answer: $5 \times 3 + 5 = 20 \Rightarrow$ D

Answer: (D) Go Back to Q53

Q54.

Solution

Concept — Data sufficiency (compare ages): We want to know whether X > Y.

Step 1 — Statement I alone (X = Z+5): relates X and Z only; says nothing about Y. Not sufficient.

Step 2 — Statement II alone (Z = Y − 3): relates Z and Y only; says nothing about X. Not sufficient.

Step 3 — Both together: X = Z+5 and Y = Z+3. Then X−Y = (Z+5)−(Z+3) = 2 > 0, so X is older than Y. Sufficient.

Step 4 — Conclusion: Both statements together are sufficient, but neither alone is.

Final Answer: C

Answer: (C) Go Back to Q54

Q55.

Solution

Concept — Data sufficiency (relationship): We want how P is related to Q.

Step 1 — Statement I alone: "P is the son of Q's father" means P and Q share the same father and P is male, so P is the brother of Q. This fixes the relation. Sufficient. ✓

Step 2 — Statement II alone: "Q is the only daughter of P's father" means P and Q share the same father; since Q is the (only) daughter and P is a separate child of that father, P is Q's brother. This also fixes the relation. Sufficient. ✓

Step 3 — Conclusion: Each statement alone is sufficient.

Final Answer: A

Answer: (A) Go Back to Q55

Q56.

Solution

Concept — Logical Venn (class relationships): Translate each relation into circle placement.

Step 1 — All pencils are stationery: the Pencils circle lies entirely inside the Stationery circle.

Step 2 — Tables are neither pencils nor stationery: the Tables circle is wholly separate (disjoint) from both.

Step 3 — Match the options:

Pencils wholly inside Stationery; Tables a separate disjoint circle.

Final Answer: B

Answer: (B) Go Back to Q56

Q57.

Solution

Concept — Bar chart (sum of bar heights): Read each month's value and add.

Step 1 — Read the bars: Jan 40, Feb 60, Mar 50, Apr 70, May 80.

Step 2 — Add: $40 + 60 = 100$; $100 + 50 = 150$; $150 + 70 = 220$; $220 + 80 = 300$.

Why other options are wrong:

- $280, 290, 320$ all come from mis-adding one of the bars.

Final Answer: total $= 300$ cars $\Rightarrow$ D

Answer: (D) Go Back to Q57

Q58.

Solution

Concept — Bar chart (tallest bar): The highest sales is the tallest bar.

Step 1 — Compare heights: Jan 40, Feb 60, Mar 50, Apr 70, May 80.

Step 2 — Identify the maximum: 80 (May) is the largest.

Final Answer: May had the highest sales $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q58

Q59.

Solution

Concept — Percentage increase: $\dfrac{\text{increase}}{\text{original}} \times 100$.

Step 1 — Read the values: Jan $= 40$, Feb $= 60$.

Step 2 — Increase: $60 - 40 = 20$.

Step 3 — Percentage: $\dfrac{20}{40} \times 100 = 50\%$.

Why other options are wrong:

- $33\frac{1}{3}\%$ would use 60 as the base; 40% and 20% do not match the figures.

Final Answer: a 50% increase $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q59

Q60.

Solution

Concept — Average: Average $= \dfrac{\text{total}}{\text{number of months}}$.

Step 1 — Total (from Q57): 300 cars.

Step 2 — Number of months: 5.

Step 3 — Average: $\dfrac{300}{5} = 60$.

Why other options are wrong:

- $50, 55, 65$ would require a different total or month count.

Final Answer: average $= 60$ cars per month $\Rightarrow$ B

Answer: (B) Go Back to Q60

Answer Key

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