

MAH MCA CET Logical & Abstract Reasoning

Sample Paper – 2

Duration: 27 Minutes

Maximum Marks: 60

Instructions

- This paper contains **30** Multiple Choice Questions (Single Correct Answer), modelled on the Logical & Abstract Reasoning section of **MAH MCA CET**.
- Each correct answer carries **+2 marks**. There is **no negative marking** for incorrect or unattempted answers.
- Only **one** option is correct per question.
- Use of mobile phones, calculators, or electronic gadgets is strictly prohibited. Rough work may be done in the space provided in the booklet.

Logical & Abstract Reasoning

Q1. What number comes next in the series: 3, 6, 12, 24, 48, ?

- (A) 84
- (B) 96
- (C) 72
- (D) 108

Q2. What letter comes next in the series: Z, X, V, T, ?

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

Q3. Word Analogy. Pen : Write :: Knife : ?

- (A) Cut
- (B) Cook

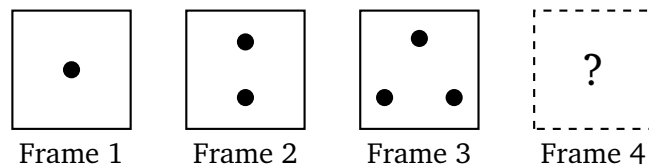


- (C) Sharpen
- (D) Stab

Q4. Number Analogy. $7 : 49 :: 9 : ?$

- (A) 72
- (B) 63
- (C) 81
- (D) 18

Q5. Study the figure series below. The first three frames follow a clear pattern. Which option correctly represents Frame 4?



- (A) A square with 3 dots in a triangular arrangement (same as Frame 3)
- (B) A square with 4 dots, one in each corner
- (C) A square with 5 dots (four corners and one at centre)
- (D) A square with 2 dots placed left and right

Q6. Odd One Out. Which of the following is the odd one out? 2, 3, 5, 7, 9, 11

- (A) 3
- (B) 5
- (C) 7
- (D) 9

Q7. In a certain code, ROSE is written as TQUG. Using the same coding rule, how is LILY written?

- (A) NKNA
- (B) MKNA
- (C) NJNA



(D) NKMA

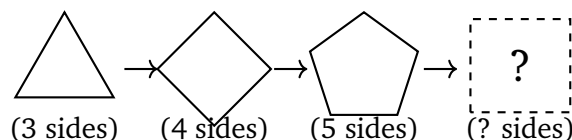
Q8. Rohit's mother is the only daughter of Seema's father. How is Seema related to Rohit?

- (A) Aunt
- (B) Sister
- (C) Mother
- (D) Grandmother

Q9. Starting from point X, Kavya walks 8 km West and then 6 km North. What is her straight-line distance from point X?

- (A) 14 km
- (B) 10 km
- (C) 8 km
- (D) 12 km

Q10. The shapes below follow a pattern: each shape has one more side than the previous. Which shape comes next?



- (A) Pentagon
- (B) Triangle
- (C) Octagon
- (D) Hexagon

Q11. Syllogism. Consider the two statements:

Statement 1: No fish is a mammal.

Statement 2: All whales are mammals.

Conclusion: No whale is a fish.

Which of the following is correct?

- (A) The conclusion follows from the given statements



- (B) The conclusion does not follow from the given statements
- (C) Data given is insufficient to draw any conclusion
- (D) The conclusion only partially follows

Q12. Statement–Conclusion. Statement: “Regular exercise keeps one healthy.”

Conclusion I: People who do not exercise are unhealthy.

Conclusion II: Health depends, at least in part, on exercise.

Which conclusion(s) follow?

- (A) Only Conclusion I follows
- (B) Both Conclusions I and II follow
- (C) Only Conclusion II follows
- (D) Neither conclusion follows

Q13. A 3×3 number matrix follows a pattern. Find the missing value marked “?”.

1	2	3
4	5	6
7	8	?

- (A) 6
- (B) 10
- (C) 8
- (D) 9

Q14. In a class of 30 students, Vishal ranks 11th from the top. What is his rank from the bottom?

- (A) 18th
- (B) 20th
- (C) 19th
- (D) 21st

Q15. Five people P, Q, R, S, and T sit in a straight row facing South. The following conditions hold:



- S is to the left of P.
- P is *immediately* to the left of Q.
- R is to the right of S, but R is not adjacent to S.
- T is seated between Q and R.

Who sits at the **middle** position of the row?

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

Q16. In a code language, the word STAR has the code **58** (sum of alphabetic positions: S=19, T=20, A=1, R=18; total=58). Using the same rule, what is the code for the word MOON?

- (A) 55
- (B) 56
- (C) 57
- (D) 58

Q17. Odd One Out. Which of the following does not belong to the same group?
Laptop, Desktop, Tablet, Keyboard

- (A) Laptop
- (B) Desktop
- (C) Tablet
- (D) Keyboard

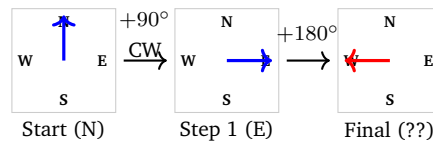
Q18. X is Y's brother. Y is Z's sister. Z is W's father. How is X related to W?

- (A) Father
- (B) Uncle
- (C) Brother
- (D) Grandfather

Q19. A car starts facing **North**. It first turns 90° clockwise, then turns 180° . Study the diagram below and identify the direction in which the car is



finally facing.



- (A) West
- (B) East
- (C) South
- (D) North

Q20. What number comes next in the series: 1, 1, 2, 3, 5, 8, 13, ?

- (A) 18
- (B) 20
- (C) 21
- (D) 24

Q21. Four persons A, B, C, and D live on different floors of a four-storey building numbered 1 (ground) to 4 (top). The following facts are known:

- B lives on the top floor (floor 4).
- D lives on floor 2.
- A lives on a higher floor than C.

Who lives on floor 3?

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

Q22. Letter Analogy. B F J N : C G K O :: D H L P : ?

- (A) FILM
- (B) EIMQ
- (C) DHLP
- (D) FJOQ



Q23. Syllogism. Consider the two statements:

Statement 1: All roses are flowers.

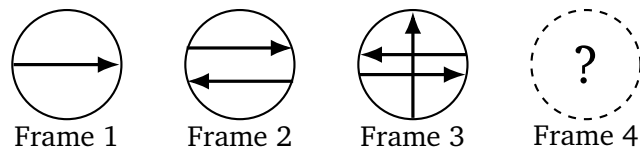
Statement 2: Some flowers are red.

Conclusion: Some roses are red.

Which of the following is correct?

- (A) The conclusion does not necessarily follow
- (B) The conclusion definitely follows
- (C) Data is insufficient to decide
- (D) The conclusion partially follows

Q24. Study the figure series. Each frame shows a circle with an increasing number of arrows pointing in different directions. What should Frame 4 contain?



- (A) 3 arrows (same as Frame 3)
- (B) 5 arrows (right, left, up, down, and one diagonal)
- (C) 4 arrows (right, left, up, and down)
- (D) 2 arrows (same as Frame 2)

Q25. In a code language, PENCIL is written as QFODJM (each letter is shifted one position forward in the alphabet). Using the same rule, what is the code for PAPER?

- (A) QAQFS
- (B) RBQFS
- (C) QBQFR
- (D) QBQFS

Q26. Find the next number in the series: 2, 5, 10, 17, 26, 37, ?

- (A) 48
- (B) 50



- (C) 47
(D) 52

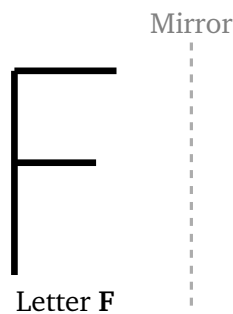
Q27. Statement–Assumption. Statement: “Use Brand X toothpaste for whiter teeth in just 2 weeks.”

Assumption I: People desire to have whiter teeth.

Assumption II: Brand X toothpaste is the only product that can whiten teeth.

Which assumption(s) are **implicit** in the statement?

- (A) Only Assumption I is implicit
(B) Only Assumption II is implicit
(C) Both Assumptions I and II are implicit
(D) Neither assumption is implicit
- Q28.** The figure below shows the letter F. A vertical mirror is placed to its right (shown as a dashed line). Which option correctly represents the mirror image?



- (A) F rotated 90° clockwise
(B) F flipped upside-down (top-bottom reflection)
(C) The original F (no visible change)
(D) F horizontally reversed (left–right reflection)
- Q29.** Six people A, B, C, D, E, and F sit around a circular table with equal spacing. The following is known:
- A sits directly opposite D.
 - Moving clockwise from A: B sits between A and C.



- Moving clockwise from D: E sits between D and F.

Who sits **directly opposite** to B?

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

Q30. Number Analogy. $12 : 144 :: 15 : ?$

- (A) 180
- (B) 225
- (C) 200
- (D) 210



Detailed Solutions

Q1.

Solution

Concept: Geometric (exponential) series – each term is obtained by multiplying the previous term by a fixed common ratio.

Step-by-step:

- Series: 3, 6, 12, 24, 48, ?
- Common ratio $r = 6 \div 3 = 2$.
- Verify: $6 \times 2 = 12 \checkmark$, $12 \times 2 = 24 \checkmark$, $24 \times 2 = 48 \checkmark$.
- Next term $= 48 \times 2 = 96$.

Why other options are wrong:

- (A) 84: $48 + 36$ – no fixed ratio.
- (C) 72: $48 + 24$ – uses a different (and shrinking) addition.
- (D) 108: 48×2.25 – not a whole-number ratio consistent with the series.

Final Answer: $48 \times 2 = 96 \Rightarrow \boxed{\text{B}}$

Answer: (B) [Go Back to Q 1](#)

Q2.

Solution

Concept: Alphabetic series – letters decrease by 2 positions each step (every alternate letter is skipped).

Step-by-step:

- $Z(26) \xrightarrow{-2} X(24) \xrightarrow{-2} V(22) \xrightarrow{-2} T(20) \xrightarrow{-2} \mathbf{R(18)}$.

Why other options are wrong:

- (A) S(19): subtracts only 1, not 2.
- (B) Q(17): subtracts 3 instead of 2.
- (C) P(16): subtracts 4 instead of 2.

Final Answer: $T(20) - 2 = R(18) \Rightarrow \boxed{\text{D}}$

Answer: (D) [Go Back to Q 2](#)



Q3.

Solution**Concept:** Tool-to-primary-function analogy.**Step-by-step:**

- A *Pen* is a tool whose primary function is to *Write*.
- A *Knife* is a tool whose primary function is to *Cut*.

Why other options are wrong:

- (B) Cook: cooking is an activity; a knife assists in cooking but does not cook by itself.
- (C) Sharpen: one *sharpens a knife*; it is not what a knife does.
- (D) Stab: a secondary/harmful use, not the tool's intended primary function.

Final Answer: Pen : Write :: Knife : Cut $\Rightarrow$ AAnswer: (A) [Go Back to Q 3](#)

Q4.

Solution**Concept:** Square number analogy – each number is paired with its square ($n : n^2$).**Step-by-step:**

- $7 : 49 \Rightarrow 7^2 = 49 \checkmark$
- $9 : ? \Rightarrow 9^2 = 81$

Why other options are wrong:

- (A) $72 = 9 \times 8$: product with 8, not a square.
- (B) $63 = 9 \times 7$: product with 7, not a square.
- (D) $18 = 9 \times 2$: product with 2, not a square.

Final Answer: $9^2 = 81 \Rightarrow$ CAnswer: (C) [Go Back to Q 4](#)

Q5.

Solution**Concept:** Figure series – the number of dots inside the square increases by one in each successive frame.**Step-by-step:**

- Frame 1: 1 dot (centre).



- Frame 2: 2 dots (top and bottom).
- Frame 3: 3 dots (triangular arrangement).
- Pattern: each frame adds one dot $\Rightarrow$ Frame 4 must have **4 dots**, placed one in each corner of the square.

Why other options are wrong:

- (A) 3 dots: merely repeats Frame 3; the count must increase.
- (C) 5 dots: skips one step in the sequence.
- (D) 2 dots: repeats Frame 2.

Final Answer: Frame 4 contains 4 dots $\Rightarrow$ **B**

Answer: (B) [Go Back to Q 5](#)

Q6.

Solution

Concept: Odd one out – identifying a composite number among prime numbers.

Step-by-step:

- 2: prime. 3: prime. 5: prime. 7: prime. 11: prime.
- $9 = 3 \times 3$: **composite** (divisible by 3). It is the only non-prime in the list.

Why other options are wrong:

- (A) 3, (B) 5, (C) 7: all are prime numbers and correctly belong to the group.

Final Answer: 9 is the only composite number $\Rightarrow$ **D**

Answer: (D) [Go Back to Q 6](#)

Q7.

Solution

Concept: Letter-shift coding – each letter is replaced by the letter 2 positions ahead in the alphabet.

Verification with ROSE $\rightarrow$ TQUG:

$$R(+2) = T, \quad O(+2) = Q, \quad S(+2) = U, \quad E(+2) = G \quad \checkmark$$

Applying to LILY:

$$L(+2) = N, \quad I(+2) = K, \quad L(+2) = N, \quad Y(+2) = A$$

(Note: Y is the 25th letter; $25 + 2 = 27 \equiv 1 = A$, cycling back.)



Code = NKNA

Why other options are wrong:

- (B) MKNA: $M = L+1$ (only one-position shift for L).
- (C) NJNA: $J = I+1$ (only one-position shift for I).
- (D) NKMA: $M = Y+14$; incorrect last letter (should be A).

Final Answer: LILY $\rightarrow$ NKNA $\Rightarrow$ A

Answer: (A) [Go Back to Q 7](#)

Q8.

Solution

Concept: Blood relation analysis – identifying a person from a relational description.

Step-by-step:

- “Seema’s father” has a daughter.
- “The *only* daughter of Seema’s father” $\Rightarrow$ this only daughter is *Seema herself*.
- Therefore “Rohit’s mother is Seema”.
- Conclusion: Seema is Rohit’s **Mother**.

Why other options are wrong:

- (A) Aunt: would require Seema to be a sibling of one of Rohit’s parents – not established here.
- (B) Sister: Rohit’s sister is of the same generation; Seema is his parent.
- (D) Grandmother: would add an extra generation between Seema and Rohit.

Final Answer: Seema is Rohit’s Mother $\Rightarrow$ C

Answer: (C) [Go Back to Q 8](#)

Q9.

Solution

Concept: Pythagoras theorem applied to a direction-distance problem (two perpendicular displacements).

Step-by-step:

- Kavya walks 8 km West (horizontal) then 6 km North (vertical).
- The two displacements are perpendicular, forming a right-angled triangle.



- Straight-line distance from X:

$$d = \sqrt{8^2 + 6^2} = \sqrt{64 + 36} = \sqrt{100} = 10 \text{ km}$$

Why other options are wrong:

- (A) 14 km = 8 + 6: simple addition, ignoring the right angle.
- (C) 8 km: only the horizontal (West) leg of the triangle.
- (D) 12 km: not a side of any right triangle formed by legs 6 and 8.

Final Answer: $\sqrt{64 + 36} = 10 \text{ km} \Rightarrow \boxed{\text{B}}$

Answer: (B) [Go Back to Q 9](#)

Q10.

Solution

Concept: Abstract figure series – each polygon gains one side per step.

Step-by-step:



Why other options are wrong:

- (A) Pentagon (5 sides): already the third term; the pattern moves forward.
- (B) Triangle (3 sides): the starting shape; the series does not reverse.
- (C) Octagon (8 sides): would require jumping two steps at once.

Final Answer: $3 \rightarrow 4 \rightarrow 5 \rightarrow 6 \text{ sides} = \text{Hexagon} \Rightarrow \boxed{\text{D}}$

Answer: (D) [Go Back to Q 10](#)

Q11.

Solution

Concept: Syllogism – combining two universal categorical propositions.

Step-by-step:

- Statement 1 (No fish is a mammal): $\text{Fish} \cap \text{Mammal} = \emptyset$.
- Statement 2 (All whales are mammals): $\text{Whale} \subseteq \text{Mammal}$.
- Since $\text{Whale} \subseteq \text{Mammal}$ and $\text{Mammal} \cap \text{Fish} = \emptyset$, it follows that $\text{Whale} \cap \text{Fish} = \emptyset$.
- Therefore: **No whale is a fish.** The conclusion *follows*.

Venn diagram: The Whale set lies entirely inside the Mammal set. The Fish set is completely outside the Mammal set. Hence Whale and Fish are disjoint – the



conclusion is valid.

Final Answer: The conclusion follows $\Rightarrow$ **A**

Answer: (A) [Go Back to Q 11](#)

Q12.

Solution

Concept: Statement–conclusion analysis – checking the exact scope of a statement’s implication.

Statement: “Regular exercise keeps one healthy.”

Conclusion I – “People who do not exercise are unhealthy.”: The statement says exercise *helps* maintain health; it does **not** claim it is the *only* determinant. Absence of exercise does not *necessarily* cause poor health. **Conclusion I does not follow.**

Conclusion II – “Health depends, at least in part, on exercise.”: This is a careful, qualified paraphrase of the statement – it makes no absolute claim and is directly supported by the statement. **Conclusion II follows.**

Final Answer: Only Conclusion II follows $\Rightarrow$ **C**

Answer: (C) [Go Back to Q 12](#)

Q13.

Solution

Concept: Number matrix – the integers fill the 3×3 grid in sequential order, left to right, top to bottom.

Step-by-step:

- Row 1: 1, 2, 3 Row 2: 4, 5, 6 Row 3: 7, 8, ?
- Continuing the natural-number sequence: 1, 2, 3, 4, 5, 6, 7, 8, **9**.
- The missing value is **9**.

Why other options are wrong:

- (A) 6: already occupies position (row 2, col 3).
- (B) 10: exceeds the 9-cell sequential count; there is no 10th cell.
- (C) 8: already occupies position (row 3, col 2).

Final Answer: Missing value = 9 $\Rightarrow$ **D**

Answer: (D) [Go Back to Q 13](#)



Q14.

Solution**Concept:** Rank conversion – rank from bottom = Total – rank from top + 1.**Step-by-step:**

$$\text{Rank from bottom} = 30 - 11 + 1 = 20$$

Intuition: There are $11 - 1 = 10$ students above Vishal and $30 - 11 = 19$ students below him. His rank from the bottom counts the 19 students below him plus himself: $19 + 1 = 20$.

Why other options are wrong:

- (A) $18 = 30 - 12$: uses rank 12 instead of 11.
- (C) $19 = 30 - 11$: forgets to add 1 (Vishal himself).
- (D) $21 = 30 - 10 + 1$: uses rank 10 instead of 11.

Final Answer: Rank from bottom = 20 $\Rightarrow$ **B****Answer: (B)** [Go Back to Q 14](#)

Q15.

Solution**Concept:** Linear seating arrangement – constraint satisfaction.**Deduction (left to right, positions 1–5):**

- P is *immediately* to the left of Q: the pair PQ occupies adjacent slots.
- S is to the left of P: S ... P Q.
- T is between Q and R (and R is to the right of S): Q T R.
- Combining: **S(1) – P(2) – Q(3) – T(4) – R(5)**.

The **middle** position is position 3, occupied by **Q**.**Why other options are wrong:**

- (B) T: T sits at position 4 (4th from the left).
- (C) P: P sits at position 2.
- (D) R: R sits at position 5 (rightmost end).

Final Answer: Middle person is Q $\Rightarrow$ **A****Answer: (A)** [Go Back to Q 15](#)

Q16.

Solution

Concept: Coding by summing the alphabetic positions (A=1, B=2, ..., Z=26) of all letters.

Verification – STAR:

$$S(19) + T(20) + A(1) + R(18) = 58 \quad \checkmark$$

Apply to MOON:

$$M(13) + O(15) + O(15) + N(14) = 57$$

Why other options are wrong:

- (A) 55: under-counts by 2 (e.g., uses M=11 instead of 13).
- (B) 56: under-counts by 1.
- (D) 58: the code for STAR; MOON $\neq$ STAR.

Final Answer: Code for MOON = 57 $\Rightarrow$ **C**

Answer: (C) [Go Back to Q 16](#)

Q17.

Solution

Concept: Odd one out – classification by functional category.

Step-by-step:

- **Laptop, Desktop, Tablet:** all are complete, standalone computing *devices* capable of processing, storing, and displaying information independently.
- **Keyboard:** an *input peripheral*. It cannot perform computations on its own; it only feeds data to a computing device.

Why other options are wrong:

- (A) Laptop, (B) Desktop, (C) Tablet: all are full computing systems – they belong to the same category.

Final Answer: Keyboard is the odd one out $\Rightarrow$ **D**

Answer: (D) [Go Back to Q 17](#)



Q18.

Solution**Concept:** Multi-step blood relation chain.**Step-by-step:**

- X is Y's *brother* $\Rightarrow$ X and Y are siblings.
- Y is Z's *sister* $\Rightarrow$ Y and Z are siblings.
- Therefore X and Z are also siblings (X is Z's brother).
- Z is W's *father* $\Rightarrow$ Z is one generation above W.
- X is Z's brother $\Rightarrow$ X is the paternal *uncle* of W.

Why other options are wrong:

- (A) Father: Z is W's father; X is Z's brother, not Z himself.
- (C) Brother: X is Z's brother, but W is Z's child – a different generation.
- (D) Grandfather: would require X to be Z's father, not Z's brother.

Final Answer: X is W's Uncle $\Rightarrow$ **B****Answer:** (B) [Go Back to Q 18](#)

Q19.

Solution**Concept:** Direction sense – tracking sequential turns on a compass.**Step-by-step:**

- Start: facing **North**.
- Turn 90° clockwise from North $\Rightarrow$ N $\rightarrow$ E: now facing **East**.
- Turn 180° from East $\Rightarrow$ E $\rightarrow$ W (directly opposite East): now facing **West**.

Summary: North $\xrightarrow{+90^\circ \text{ CW}}$ East $\xrightarrow{+180^\circ}$ West**Why other options are wrong:**

- (B) East: the direction after the *first* turn only.
- (C) South: would result from a further 90° CW turn from East (90° , not 180°).
- (D) North: the original starting direction.

Final Answer: Final direction is West $\Rightarrow$ **A****Answer:** (A) [Go Back to Q 19](#)

Q20.

Solution

Concept: Fibonacci sequence – each term is the sum of the two immediately preceding terms.

Step-by-step:

1, 1, 2, 3, 5, 8, 13, ?

$$1 + 1 = 2, \quad 1 + 2 = 3, \quad 2 + 3 = 5, \quad 3 + 5 = 8, \quad 5 + 8 = 13, \quad 8 + 13 = \mathbf{21}$$

Why other options are wrong:

- (A) $18 = 13 + 5$: adds a non-adjacent pair (skips 8).
- (B) 20: not obtainable as the sum of any two consecutive Fibonacci terms here.
- (D) $24 = 13 + 11$: 11 does not appear in the series.

Final Answer: $8 + 13 = 21 \Rightarrow \boxed{\text{C}}$

Answer: (C) [Go Back to Q 20](#)

Q21.

Solution

Concept: Logical deduction – floor allocation with given constraints.

Fixed facts:

- $B \rightarrow \text{Floor 4 (top)}$. $D \rightarrow \text{Floor 2}$.
- Remaining floors for A and C: floors 1 and 3.

Apply constraint (A lives above C):

- A must be on a higher floor than C.
- Among floors 1 and 3: $A \rightarrow \text{Floor 3}$, $C \rightarrow \text{Floor 1}$.

Final allocation: Floor 1: C, Floor 2: D, **Floor 3: A**, Floor 4: B.

Why other options are wrong:

- (A) C: C is on floor 1 (below A).
- (B) D: D is fixed on floor 2.
- (C) B: B is fixed on floor 4 (top).

Final Answer: Floor 3 is occupied by A $\Rightarrow \boxed{\text{D}}$

Answer: (D) [Go Back to Q 21](#)



Q22.

Solution

Concept: Letter analogy – combining two patterns (arithmetic spacing within each word, and a +1 shift between the two words).

Pattern analysis:

- BFJN: B(2), F(6), J(10), N(14) – consecutive letters differ by +4.
- CGKO: C(3), G(7), K(11), O(15) – each letter is exactly +1 from the corresponding letter in BFJN.

Apply to DHLP:

$$D(4), H(8), L(12), P(16) \quad (\text{each} + 4)$$

Add 1 to each letter: $E(5), I(9), M(13), Q(17) = \mathbf{EIMQ}$

Why other options are wrong:

- (A) FILM: unequal spacing; F(6)-I(9)-L(12)-M(13).
- (C) DHLP: same as the given term (no +1 shift applied).
- (D) FJOQ: F(6)-J(10)-O(15)-Q(17); irregular gaps, not +4 throughout.

Final Answer: $DHLP + 1 = EIMQ \Rightarrow \boxed{B}$

Answer: (B) [Go Back to Q 22](#)

Q23.

Solution

Concept: Syllogism validity – a conclusion is valid only if it is necessarily entailed by the premises.

Premises:

- All roses are flowers $\Rightarrow \text{Roses} \subseteq \text{Flowers}$.
- Some flowers are red $\Rightarrow (\text{Flowers} \cap \text{Red}) \neq \emptyset$.

Analysis: The red flowers could be *non-rose* flowers (e.g., tulips or marigolds). The premises do not force any overlap between roses and red objects. A Venn diagram can have the “red” region entirely within the “non-rose flowers” part of the Flowers set.

Therefore the conclusion “Some roses are red” does **not** necessarily follow.

Why other options are wrong:

- (B) Conclusion definitely follows: this would require the premises to force roses and red things to overlap – they do not.
- (C) Data insufficient: the premises are sufficient to determine that the conclusion is *invalid*.



- (D) Partially follows: syllogistic conclusions are binary – they either follow or they do not.

Final Answer: Conclusion does not necessarily follow $\Rightarrow$ **A**

Answer: (A) [Go Back to Q 23](#)

Q24.

Solution

Concept: Abstract figure series – the number of arrows inside the circle increases by one per frame, with each new arrow pointing in a new direction.

Step-by-step:

- Frame 1: 1 arrow (right $\rightarrow$).
- Frame 2: 2 arrows (right $\rightarrow$, left $\leftarrow$).
- Frame 3: 3 arrows (right $\rightarrow$, left $\leftarrow$, up $\uparrow$).
- Frame 4: **4 arrows** (right $\rightarrow$, left $\leftarrow$, up $\uparrow$, down $\downarrow$).

Why other options are wrong:

- (A) 3 arrows: repeats Frame 3 – no addition.
- (B) 5 arrows: skips a step in the pattern.
- (D) 2 arrows: repeats Frame 2.

Final Answer: Frame 4 has 4 arrows $\Rightarrow$ **C**

Answer: (C) [Go Back to Q 24](#)

Q25.

Solution

Concept: Letter-shift coding – each letter is replaced by the letter one position ahead in the alphabet.

Verification with PENCIL $\rightarrow$ QFODJM:

$$P \rightarrow Q, E \rightarrow F, N \rightarrow O, C \rightarrow D, I \rightarrow J, L \rightarrow M \quad \checkmark$$

Applying to PAPER:

$$P \rightarrow Q, A \rightarrow B, P \rightarrow Q, E \rightarrow F, R \rightarrow S$$

Code = QBQFS

Why other options are wrong:



- (A) QAQFS: second letter A – the original A was not shifted ($A+0 = A$, should be B).
- (B) RBQFS: first letter R = $P + 2$ (over-shifted by 2).
- (C) QBQFR: last letter R – the original R was not shifted ($R+0 = R$, should be S).

Final Answer: PAPER $\rightarrow$ QBQFS $\Rightarrow$ D

Answer: (D) [Go Back to Q 25](#)

Q26.

Solution

Concept: Number series of the form $n^2 + 1$ for $n = 1, 2, 3, \dots$

Step-by-step:

$$\begin{aligned} n = 1 : 1^2 + 1 &= 2\checkmark & n = 2 : 2^2 + 1 &= 5\checkmark & n = 3 : 3^2 + 1 &= 10\checkmark \\ n = 4 : 4^2 + 1 &= 17\checkmark & n = 5 : 5^2 + 1 &= 26\checkmark & n = 6 : 6^2 + 1 &= 37\checkmark \\ n = 7 : 7^2 + 1 &= 50 \end{aligned}$$

Alternative check (differences): 3, 5, 7, 9, 11, 13, ... (consecutive odd numbers).
Next difference after 11 is 13: $37 + 13 = 50$.

Why other options are wrong:

- (A) $48 = 37 + 11$: uses the previous (6th) difference, not the 7th.
- (C) $47 = 37 + 10$: incorrect; differences are odd, not even.
- (D) $52 = 37 + 15$: skips a step.

Final Answer: $7^2 + 1 = 50 \Rightarrow$ B

Answer: (B) [Go Back to Q 26](#)

Q27.

Solution

Concept: Implicit assumption – identifying the unstated belief that must be true for the statement to make sense as an advertisement.

Statement: “Use Brand X toothpaste for whiter teeth in just 2 weeks.”

Assumption I – People desire whiter teeth: The advertisement makes sense *only if* the target audience *wants* whiter teeth. Without this desire, there is no reason to appeal to this benefit. **Assumption I is implicit.**

Assumption II – Brand X is the only whitening product: The statement does *not*



claim exclusivity. It merely promises whitening within a time frame. Other products may also whiten teeth. **Assumption II is not implicit.**

Final Answer: Only Assumption I is implicit $\Rightarrow$ A

Answer: (A) [Go Back to Q 27](#)

Q28.

Solution

Concept: Mirror image – reflection across a vertical axis produces a left-right (horizontal) flip.

Structure of the letter F:

- Vertical stroke on the *left*.
- Top horizontal bar extending to the *right*.
- Middle horizontal bar extending to the *right* (shorter than top).

After vertical mirror (right-side mirror): every point at distance d to the left of the mirror is now at distance d to the right.

- Vertical stroke moves to the *right* side.
- Top and middle bars now extend to the *left*.
- Result: a **horizontally reversed F** (the mirror image of F).

Why other options are wrong:

- (A) 90° rotation: produces an F lying on its side – not a vertical mirror image.
- (B) Upside-down: a top-bottom flip, not a left-right flip.
- (C) Original F: a mirror always changes a non-symmetric figure; F has no left-right symmetry.

Final Answer: Horizontally reversed F $\Rightarrow$ D

Answer: (D) [Go Back to Q 28](#)

Q29.

Solution

Concept: Circular seating arrangement – in a 6-person circle, each person's opposite is 3 seats away.

Constructing the arrangement (positions 1–6 clockwise):

- A at position 1; D opposite A at position $1 + 3 = 4$.
- Moving clockwise from A: B(2), C(3) (B between A and C).
- Moving clockwise from D: E(5), F(6) (E between D and F).



- Circle: A(1) – B(2) – C(3) – D(4) – E(5) – F(6) – [back to A].

Finding the opposite of B: B is at position 2; opposite = position $2 + 3 = 5 = \text{E}$.

Why other options are wrong:

- (A) F: F is at position 6, opposite C at position 3.
- (B) D: D is at position 4, opposite A at position 1.
- (D) C: C is at position 3, opposite F at position 6.

Final Answer: Person opposite to B is E $\Rightarrow$

Answer: (C) [Go Back to Q 29](#)

Q30.

Solution

Concept: Square number analogy – each number is paired with its square ($n : n^2$).

Step-by-step:

- $12 : 144 \Rightarrow 12^2 = 144 \checkmark$
- $15 : ? \Rightarrow 15^2 = 225$

Why other options are wrong:

- (A) $180 = 15 \times 12$: product of the two given base numbers, not 15^2 .
- (C) 200: not a perfect square of 15 (nor of any nearby integer).
- (D) $210 = 15 \times 14$: product with 14, not a square.

Final Answer: $15^2 = 225 \Rightarrow$

Answer: (B) [Go Back to Q 30](#)



Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	D	3	A	4	C	5	B
6	D	7	A	8	C	9	B	10	D
11	A	12	C	13	D	14	B	15	A
16	C	17	D	18	B	19	A	20	C
21	D	22	B	23	A	24	C	25	D
26	B	27	A	28	D	29	C	30	B

