AME CET Aptitude & Reasoning

Sample Paper – 7

Duration: 30 Minutes **Maximum Marks: 120**

Instructions

- This paper contains **30** Multiple Choice Questions (Single Correct Answer), covering **Quantitative Aptitude** (Q1–15) and **Logical & Analytical Reasoning** (Q16–30), in the **AME CET** marking style.
- Each correct answer carries **+4 marks**. Each wrong answer carries -1 **mark**. Unattempted questions carry **0 marks**.
- Only **one** option is correct per question. Choose carefully.
- This is a **supplementary aptitude practice set** for AME CET aspirants; pacing is one minute per question, matching the main exam.
- Use of mobile phones, calculators, or any electronic gadget is strictly prohibited.

Part A: Quantitative Aptitude

Q1. The value of 20% of 350 is:

(A) 35

(B) 70

(C) 60

(D) 80

Q2. The number 90 is divided into two parts in the ratio $4 : 5$. The larger part is:

(A) 45

(B) 40

(C) 50

(D) 54

Q3. An article is sold for Rs. 360 at a loss of 10%. Its cost price is:

(A) Rs. 400

(B) Rs. 396

(C) Rs. 324

(D) Rs. 420

Q4. The average of the numbers $2, 4, 6, 8, 10, 12$ is:

(A) 6

(B) 8

(C) 6.5

(D) 7

Q5. A speed of 36 km/h expressed in metres per second is:

(A) 10 m/s

(B) 12 m/s

(C) 20 m/s

(D) 6 m/s

Q6. A can finish a piece of work in 15 days and B can finish the same work in 10 days. Working together, they will finish it in:

(A) 12 days

(B) 5 days

(C) 6 days

(D) 25 days

Q7. The simple interest on Rs. 2000 at 5% per annum is Rs. 200. The time period is:

(A) 1 year

(B) 2 years

(C) 3 years

(D) 4 years

Q8. After 5 years a person's age will be 25 years. The person's present age is:

(A) 30 years

(B) 25 years

(C) 15 years

(D) 20 years

Q9. A trader marks his goods 25% above the cost price of Rs. 400 and sells them at the marked price (no discount). His profit percent is:

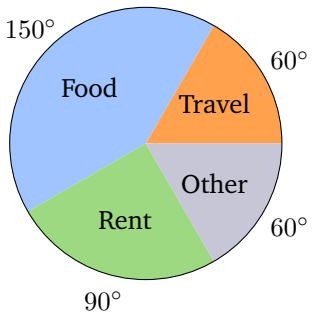
(A) 25%

(B) 20%

(C) 40%

(D) 30%

Q10. The pie chart below shows how a household's monthly budget of Rs. 12,000 is split. The amount in the **Travel** sector ($60°$) is:



(A) Rs. 3,000

(B) Rs. 1,500

(C) Rs. 2,000

(D) Rs. 5,000

Q11. A batsman has an average of 50 runs over 10 innings. The total number of runs he scored is:

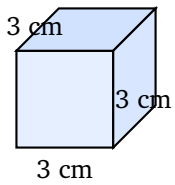
(A) 50

(B) 500

(C) 100

(D) 550

Q12. The volume of the cube of side 3 cm shown below is:



(A) 9 cm^3

(B) 18 cm^3

(C) 54 cm^3

(D) 27 cm^3

Q13. A speed of 15 m/s expressed in kilometres per hour is:

(A) 54 km/h

(B) 60 km/h

(C) 45 km/h

(D) 50 km/h

Q14. A train 180 m long is moving at 90 km/h. The time it takes to cross a pole is:

(A) 9 s

(B) 7.2 s

(C) 18 s

(D) 2 s

Q15. The compound interest on Rs. 6250 at 20% per annum for 2 years (compounded annually) is:

(A) Rs. 2500

(B) Rs. 3000

(C) Rs. 1250

(D) Rs. 2750

Part B: Logical & Analytical Reasoning

Q16. Find the next number in the series: $7,\ 14,\ 28,\ 56,\ ?$

(A) 84

(B) 96

(C) 112

(D) 64

Q17. Find the next term in the series: $A,\ D,\ I,\ P,\ ?$

(A) Y

(B) W

(C) X

(D) Z

Q18. If the letters are valued $B = 2,\ C = 3,\ \ldots,\ Z = 26$, then the value of the word **CAB** is:

(A) 5

(B) 7

(C) 8

(D) 6

Q19. Pointing to a girl, a boy said, "She is the daughter of my grandfather's only son." How is the girl related to the boy?

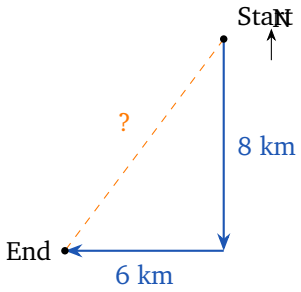
(A) Aunt

(B) Sister

(C) Mother

(D) Cousin

Q20. A person walks 8 km towards the South, then turns right and walks 6 km towards the West, as shown. How far is the person from the starting point?



(A) 10 km

(B) 14 km

(C) 2 km

(D) 48 km

Q21. Choose the option that completes the analogy: **Fish : Water :: Bird : ?**

(A) Nest

(B) Feather

(C) Sky

(D) Wing

Q22. Choose the one that does **not** belong with the others: *Apple, Banana, Carrot, Mango*

(A) Carrot

(B) Banana

(C) Mango

(D) Apple

Q23. Statements: *All birds fly. A sparrow is a bird.* Which conclusion necessarily follows?

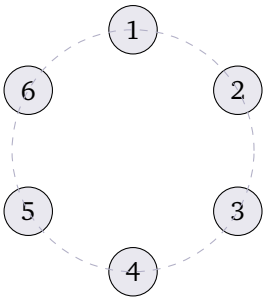
(A) No sparrow flies

(B) A sparrow is not a bird

(C) Some birds do not fly

(D) A sparrow flies

Q24. Six people numbered 1 to 6 are seated evenly around a circular table in clockwise order, as shown. Who sits directly opposite person 1?



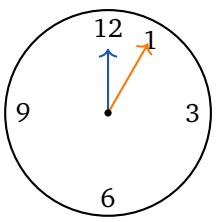
(A) 3

(B) 4

(C) 5

(D) 2

Q25. The angle between the hour hand and the minute hand of a clock at exactly 1 o'clock, shown below, is:



(A) 30°

(B) 60°

(C) 15°

(D) 90°

Q26. The number of days in a leap year is:

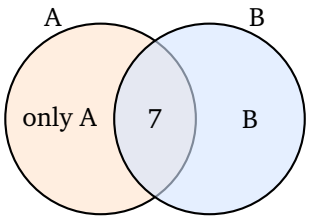
(A) 360

(B) 365

(C) 366

(D) 364

Q27. In the Venn diagram below, the total number who like activity A is 18, and 7 of them also like activity B. How many like **only A**?



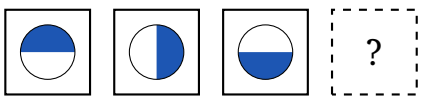
(A) 7

(B) 11

(C) 18

(D) 25

Q28. In the figure series below, a half-shaded circle turns by a fixed rotation at each step. Where should the shaded half point in the fourth box?



(A) Top

(B) Right

(C) Bottom

(D) Left

Q29. In a row, a student is 3rd from the top and 7th from the bottom. The total number of students is:

(A) 10

(B) 11

(C) 9

(D) 8

Q30. If in a certain pattern $5 \rightarrow 24$ and $6 \rightarrow 35$, then $7 \rightarrow ?$

(A) 42

(B) 49

(C) 48

(D) 56

Detailed Solutions

Q1.

Solution

Concept — Percent of a quantity: "$p\%$ of N" equals $\frac{p}{100} \times N$.

Step 1 — Write the expression:

$$20\% \text{ of } 350 = \frac{20}{100} \times 350$$

Step 2 — Simplify the fraction:

$$\frac{20}{100} = \frac{1}{5}$$

Step 3 — Multiply:

$$\frac{1}{5} \times 350 = 70$$

Why other options are wrong:

- Option A (35): this is 10% of 350, half the required percentage.
- Option C (60): does not match $\frac{1}{5} \times 350$.
- Option D (80): an over-estimate, closer to 23% of 350.

Final Answer: $70 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q1

Q2.

Solution

Concept — Dividing in a ratio: Split the total into equal parts equal to the sum of the ratio terms.

Step 1 — Find the total number of parts:

$$4 + 5 = 9 \text{ parts}$$

Step 2 — Find the value of one part:

$$\frac{90}{9} = 10$$

Step 3 — Find the larger part (5 parts):

$$5 \times 10 = 50$$

Why other options are wrong:

- Option B (40): the smaller part (4×10), not the larger.
- Option A (45): an equal split, ignoring the ratio.
- Option D (54): exceeds the correct $5 : 4$ division of 90.

Final Answer: $50 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q2

Q3.

Solution

Concept — Cost price from a loss: At a loss of $L\%$, $\text{SP} = \text{CP} \times \left(1 - \frac{L}{100}\right)$.

Step 1 — Write the relation with $L = 10$:

$$360 = \text{CP} \times (1 - 0.10) = \text{CP} \times 0.90$$

Step 2 — Solve for CP:

$$\text{CP} = \frac{360}{0.90}$$

Step 3 — Compute:

$$\frac{360}{0.90} = 400$$

Why other options are wrong:

- Option B (396): subtracts 10% of 360 from 360, applying the loss to SP instead of CP.
- Option C (324): is 10% *below* 360, the wrong direction.
- Option D (420): does not satisfy $0.90 \times \text{CP} = 360$.

Final Answer: Rs. $400 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q3

Q4.

Solution

Concept — Average: The average equals the sum of the values divided by the count.

Step 1 — Add the six numbers:

$$2 + 4 + 6 + 8 + 10 + 12 = 42$$

Step 2 — Divide by the count (6):

$$\frac{42}{6} = 7$$

Why other options are wrong:

- Option A (6): would need a total of 36, not 42.
- Option B (8): would need a total of 48.
- Option C (6.5): would need a total of 39.

Final Answer: $7 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q4

Q5.

Solution

Concept — Converting km/h to m/s: Multiply by $\frac{5}{18}$.

Step 1 — Apply the factor:

$$36 \times \frac{5}{18}$$

Step 2 — Simplify:

$$\frac{36 \times 5}{18} = \frac{180}{18} = 10 \text{ m/s}$$

Why other options are wrong:

- Option B (12): does not match $\frac{5}{18}$ applied to 36.
- Option C (20): corresponds to 72 km/h, not 36.
- Option D (6): an under-estimate; uses the wrong factor.

Final Answer: 10 m/s $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q5

Q6.

Solution

Concept — Combined work: Add the per-day work rates of A and B.

Step 1 — Write each rate:

$$\text{A's rate} = \frac{1}{15}, \qquad \text{B's rate} = \frac{1}{10}$$

Step 2 — Add the rates (LCM of 15 and 10 is 30):

$$\frac{1}{15} + \frac{1}{10} = \frac{2}{30} + \frac{3}{30} = \frac{5}{30} = \frac{1}{6}$$

Step 3 — Invert to get the time:

$$\text{Time} = \frac{1}{1/6} = 6 \text{ days}$$

Why other options are wrong:

- Option A (12) and Option D (25): larger than B working alone (10 days), impossible when both work.
- Option B (5): would require a combined rate of $1/5$, more than the actual $1/6$.

Final Answer: 6 days $\Rightarrow$ C

Answer: (C) Go Back to Q6

Q7.

Solution

Concept — Simple Interest: $\text{SI} = \dfrac{P \times R \times T}{100}$, so $T = \dfrac{\text{SI} \times 100}{P \times R}$.

Step 1 — Substitute SI $= 200$, $P = 2000$, $R = 5$**:**

$$T = \frac{200 \times 100}{2000 \times 5}$$

Step 2 — Compute the denominator:

$$2000 \times 5 = 10000$$

Step 3 — Divide:

$$T = \frac{20000}{10000} = 2 \text{ years}$$

Why other options are wrong:

- Option A (1 year): gives SI $= 100$, not 200.
- Option C (3 years): gives SI $= 300$.
- Option D (4 years): gives SI $= 400$.

Final Answer: 2 years $\Rightarrow$ B

Answer: (B) Go Back to Q7

Q8.

Solution

Concept — Present age from a future age: Subtract the elapsed years from the future age.

Step 1 — Let the present age be x: After 5 years the age is $x + 5$.

Step 2 — Apply the given condition:

$$x + 5 = 25$$

Step 3 — Solve:

$$x = 25 - 5 = 20$$

Why other options are wrong:

- Option A (30): *adds* 5 instead of subtracting.
- Option B (25): this is the future age, not the present age.
- Option C (15): subtracts 10 instead of 5.

Final Answer: 20 years $\Rightarrow$ D

Answer: (D) Go Back to Q8

Q9.

Solution

Concept — Selling at the marked price: With no discount, the selling price equals the marked price, so the profit percent equals the markup percent.

Step 1 — Find the marked price:

$$\text{MP} = 400 \times 1.25 = 500$$

Step 2 — Selling price (no discount):

$$\text{SP} = \text{MP} = 500$$

Step 3 — Compute the profit percent:

$$\frac{\text{SP} - \text{CP}}{\text{CP}} \times 100 = \frac{500 - 400}{400} \times 100 = \frac{100}{400} \times 100 = 25\%$$

Why other options are wrong:

- Option B (20%): takes the profit as a percent of SP, not CP.
- Option C (40%): mistakes the markup of Rs. 100 over Rs. 250.
- Option D (30%): does not match $100/400$.

Final Answer: $25\% \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Reading a pie chart: Each sector's share of the total equals its angle divided by 360°.

Step 1 — Find the Travel fraction:

$$\frac{60^\circ}{360^\circ} = \frac{1}{6}$$

Step 2 — Apply it to the budget:

$$\frac{1}{6} \times 12000 = 2000$$

Why other options are wrong:

- Option A (3000): corresponds to a 90° sector (Rent).
- Option B (1500): corresponds to a 45° sector, not 60°.
- Option D (5000): corresponds to a 150° sector (Food).

Final Answer: Rs. 2,000 $\Rightarrow$ C

Answer: (C) Go Back to Q10

Q11.

Solution

Concept — Total from an average: Total = average $\times$ count.

Step 1 — Identify the average and count: Average $= 50$ runs, count $= 10$ innings.

Step 2 — Multiply:

$$50 \times 10 = 500$$

Why other options are wrong:

- Option A (50): this is the average of one innings, not the total of ten.
- Option C (100): would be the total only if there were 2 innings.
- Option D (550): does not match 50×10.

Final Answer: 500 $\Rightarrow$ B

Answer: (B) Go Back to Q11

Q12.

Solution

Concept — Volume of a cube: $V = a^3$, where a is the side length.

Step 1 — Substitute $a = 3$:

$$V = 3^3$$

Step 2 — Compute:

$$3^3 = 3 \times 3 \times 3 = 27 \text{ cm}^3$$

Why other options are wrong:

- Option A (9): this is a^2 (the area of one face), not the volume.
- Option C (54): this is the total surface area $6a^2$, not the volume.
- Option B (18): unrelated partial value.

Final Answer: $27\ \text{cm}^3 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q12

Q13.

Solution

Concept — Converting m/s to km/h: Multiply by $\frac{18}{5}$.

Step 1 — Apply the factor:

$$15 \times \frac{18}{5}$$

Step 2 — Simplify:

$$\frac{15 \times 18}{5} = 3 \times 18 = 54\ \text{km/h}$$

Why other options are wrong:

- Option B (60): corresponds to about 16.7 m/s.
- Option C (45): corresponds to 12.5 m/s.
- Option D (50): does not match $15 \times \frac{18}{5}$.

Final Answer: 54 km/h $\Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Crossing a pole: The train covers its own length while passing a pole; time = length ÷ speed.

Step 1 — Convert the speed to m/s:

$$90 \times \frac{5}{18} = 25\ \text{m/s}$$

Step 2 — Divide the length by the speed:

$$\frac{180}{25} = 7.2\ \text{s}$$

Why other options are wrong:

- Option A (9 s): uses a speed of 20 m/s (72 km/h), not 25 m/s.
- Option C (18 s): uses 10 m/s.
- Option D (2 s): far too fast; would need 90 m/s.

Final Answer: 7.2 s $\Rightarrow$ B

Answer: (B) Go Back to Q14

Q15.

Solution

Concept — Compound Interest: $\text{CI} = P\left[\left(1+\frac{R}{100}\right)^T - 1\right]$.

Step 1 — Substitute $P = 6250$, $R = 20$, $T = 2$**:**

$$\text{CI} = 6250\left[(1.2)^2 - 1\right]$$

Step 2 — Evaluate $(1.2)^2$**:**

$$(1.2)^2 = 1.44$$

Step 3 — Compute:

$$6250 \times (1.44 - 1) = 6250 \times 0.44 = 2750$$

Why other options are wrong:

- Option A (2500): this is the simple interest ($6250 \times 20\% \times 2$), omitting interest on interest.
- Option B (3000): an over-estimate.
- Option C (1250): only one year's simple interest.

Final Answer: Rs. 2750 $\Rightarrow$ D

Answer: (D) Go Back to Q15

Q16.

Solution

Concept — Geometric series: Check the ratio between consecutive terms.

Step 1 — Find the common ratio:

$$\frac{14}{7} = 2, \quad \frac{28}{14} = 2, \quad \frac{56}{28} = 2$$

Each term is double the previous one.

Step 2 — Apply the ratio to the last term:

$$56 \times 2 = 112$$

Why other options are wrong:

- Option A (84): adds 28, treating the series as arithmetic.
- Option B (96): does not match doubling.
- Option D (64): adds 8, an unrelated rule.

Final Answer: $112 \Rightarrow \boxed{\text{C}}$

Answer: (C) Go Back to Q16

Q17.

Solution

Concept — Letter series from positions: Convert the letters to their alphabet positions and look for a pattern.

Step 1 — Write the positions:

$$A = 1,\ D = 4,\ I = 9,\ P = 16$$

Step 2 — Recognise the pattern:

$$1 = 1^2,\ 4 = 2^2,\ 9 = 3^2,\ 16 = 4^2$$

These are the perfect squares, so the next position is $5^2 = 25$.

Step 3 — Find the 25th letter: The 25th letter of the alphabet is Y.

Why other options are wrong:

- Option B (W): position 23, not a perfect square.
- Option C (X): position 24.
- Option D (Z): position 26.

Final Answer: Y $\Rightarrow$ A

Answer: (A) Go Back to Q17

Q18.

Solution

Concept — Positional letter values: Replace each letter by its alphabet position and add.

Step 1 — Write each letter's value:

$$C = 3, \quad A = 1, \quad B = 2$$

Step 2 — Add the values:

$$3 + 1 + 2 = 6$$

Why other options are wrong:

- Option A (5): omits the value of one letter.
- Option B (7): over-counts by 1.
- Option C (8): does not match $3 + 1 + 2$.

Final Answer: 6 $\Rightarrow$ D

Answer: (D) Go Back to Q18

Q19.

Solution

Concept — Decoding a blood-relation statement: Work outward from "my grandfather's only son."

Step 1 — Identify "my grandfather's only son": The grandfather's only son is the boy's own father.

Step 2 — Substitute back: "She is the daughter of my grandfather's only son" becomes "She is the daughter of my father." The daughter of the boy's father is his sister.

Why other options are wrong:

- Option A (Aunt): would be the father's sister, one generation too far.
- Option C (Mother): the mother is not described as her father's daughter here.
- Option D (Cousin): would need a different uncle's child, but the son is his father.

Final Answer: Sister $\Rightarrow$ B

Answer: (B) Go Back to Q19

Q20.

Solution

Concept — Shortest distance (Pythagoras): The South and West legs are perpendicular, so the straight-line distance is the hypotenuse.

Step 1 — Identify the two legs: South leg $= 8$ km, West leg $= 6$ km, meeting at a right angle.

Step 2 — Apply the Pythagoras theorem:

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

Step 3 — Simplify:

$$d = 10 \text{ km}$$

Why other options are wrong:

- Option B (14): adds the legs $8 + 6$, the path length, not the straight distance.
- Option C (2): subtracts the legs.
- Option D (48): multiplies the legs.

Final Answer: 10 km $\Rightarrow$ A

Answer: (A) Go Back to Q20

Q21.

Solution

Concept — Habitat analogy: Water is the natural medium in which a fish lives and moves; find the matching medium for a bird.

Step 1 — Identify the relationship: Fish → Water means "the medium in which it naturally moves."

Step 2 — Apply to "Bird": The medium in which a bird naturally moves (flies) is the *sky*.

Why other options are wrong:

- Option A (Nest): a bird's home, not the medium it moves through.
- Option B (Feather): a body part, not a habitat or medium.
- Option D (Wing): the organ of flight, not the medium.

Final Answer: Sky ⇒ $\boxed{C}$

Answer: (C) Go Back to Q21

Q22.

Solution

Concept — Common category test: Group the items by category; the exception is the odd one out.

Step 1 — Classify each item: Apple, Banana and Mango are fruits.

Step 2 — Examine "Carrot": A carrot is a vegetable (a root), not a fruit.

Step 3 — Conclude: Carrot does not share the "fruit" property, so it is the odd one out.

Why other options are wrong:

- Options B (Banana), C (Mango), D (Apple): all are fruits, so they belong together.

Final Answer: Carrot ⇒ $\boxed{A}$

Answer: (A) Go Back to Q22

Q23.

Solution

Concept — Applying a universal statement: "All birds fly" applies to every member of the class "birds."

Step 1 — Note the membership: A sparrow is a bird (given).

Step 2 — Apply the universal rule: Since all birds fly and a sparrow is a bird, a sparrow flies.

Why other options are wrong:

- Option A (No sparrow flies): contradicts the rule.
- Option B (A sparrow is not a bird): contradicts the given statement.
- Option C (Some birds do not fly): contradicts "all birds fly."

Final Answer: A sparrow flies $\Rightarrow$ $\boxed{\text{D}}$

Answer: (D) Go Back to Q23

Q24.

Solution

Concept — Opposite seat around a circle: With an even number n of evenly spaced seats, the seat opposite any person is $\frac{n}{2}$ places away.

Step 1 — Find the half-count:

$$\frac{n}{2} = \frac{6}{2} = 3 \text{ places}$$

Step 2 — Count 3 places clockwise from person 1:

$$1 \to 2 \to 3 \to 4$$

So person 4 is directly opposite person 1.

Why other options are wrong:

- Option A (3): only two places from 1.
- Option C (5): four places from 1.
- Option D (2): adjacent to 1, not opposite.

Final Answer: 4 $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q24

Q25.

Solution

Concept — Clock angle: The 12 hour-marks divide $360°$, so each hour gap is $30°$.

Step 1 — Count the hour gaps at 1 o'clock: At exactly 1:00 the minute hand is at 12 and the hour hand is at 1, one mark apart.

Step 2 — Multiply by $30°$:

$$1 \times 30° = 30°$$

Why other options are wrong:

- Option B ($60°$): two hour gaps (as at 2 o'clock).
- Option C ($15°$): half a gap; not a whole-hour angle.
- Option D ($90°$): three hour gaps (as at 3 o'clock).

Final Answer: $30° \Rightarrow$ A

Answer: (A) Go Back to Q25

Q26.

Solution

Concept — Leap year length: A leap year has one extra day in February (29 instead of 28).

Step 1 — Recall the ordinary year length: A common (non-leap) year has 365 days.

Step 2 — Add the extra leap day:

$$365 + 1 = 366$$

Why other options are wrong:

- Option A (360): an approximation, not the actual count.
- Option B (365): the length of a common year, not a leap year.
- Option D (364): equals exactly 52 weeks, one day short of a common year.

Final Answer: $366 \Rightarrow$ C

Answer: (C) Go Back to Q26

Q27.

Solution

Concept — Only-A region: "Only A" = (total who like A) − (those who like both A and B).

Step 1 — Note the given values: Total liking A $= 18$; those liking both $= 7$.

Step 2 — Subtract the overlap:

$$18 - 7 = 11$$

Why other options are wrong:

- Option A (7): the overlap (both), not the only-A region.
- Option C (18): the whole of A, including the overlap.
- Option D (25): adds the overlap instead of subtracting it.

Final Answer: $11 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q27

Q28.

Solution

Concept — Fixed rotation pattern: Identify the constant turn of the shaded half between successive figures.

Step 1 — Track the shaded half: Box 1 shaded at the top, Box 2 shaded at the right, Box 3 shaded at the bottom. Each step is a 90° clockwise turn.

Step 2 — Apply one more 90° clockwise turn: From the bottom, a further 90° clockwise turn moves the shaded half to the *left*.

Why other options are wrong:

- Option A (Top): that is Box 1, a full turn too early.
- Option B (Right): that is Box 2's position.
- Option C (Bottom): that is Box 3's position, with no further turn.

Final Answer: Left $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q28

Q29.

Solution

Concept — Rank from both ends: Total = (rank from top) + (rank from bottom) -1.

Step 1 — Substitute the ranks:

$$\text{Total} = 3 + 7 - 1$$

Step 2 — Compute:

$$= 9$$

The "-1" avoids counting the student twice.

Why other options are wrong:

- Option A (10): forgets to subtract 1.
- Option B (11): adds an extra without subtracting.
- Option D (8): subtracts 2 instead of 1.

Final Answer: $9 \Rightarrow$ C

Answer: (C) Go Back to Q29

Q30.

Solution

Concept — Number pattern: Each number n maps to $n^2 - 1$.

Step 1 — Verify the rule:

$$5 \to 5^2 - 1 = 25 - 1 = 24, \qquad 6 \to 6^2 - 1 = 36 - 1 = 35$$

So the rule is $n \to n^2 - 1$.

Step 2 — Apply to 7:

$$7 \to 7^2 - 1 = 49 - 1 = 48$$

Why other options are wrong:

- Option A (42): this is 7×6, not $7^2 - 1$.

- Option B (49): this is 7^2, omitting the "-1."
- Option D (56): this is 7×8.

Final Answer: $48 \Rightarrow \boxed{C}$

Answer: (C) Go Back to Q30

Answer Key

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