AME CET Aptitude & Reasoning

Sample Paper – 4

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. What percent of 50 is 15?

(A) 35%

(B) 25%

(C) 30%

(D) 20%

Q2. Two numbers are in the ratio $7 : 9$ and their difference is 10. The smaller number is:

(A) 35

(B) 45

(C) 40

(D) 30

Q3. An article is sold for Rs. 240 at a profit of 20%. Its cost price is:

(A) Rs. 180

(B) Rs. 220

(C) Rs. 192

(D) Rs. 200

Q4. The average of 12, 15 and 18 is:

(A) 16

(B) 15

(C) 14

(D) 17

Q5. A car travels at 60 km/h for 3 hours. The distance covered is:

(A) 180 km

(B) 120 km

(C) 200 km

(D) 150 km

Q6. A can finish a work in 8 days and B can finish the same work in 24 days. Working together, they will finish it in:

(A) 12 days

(B) 8 days

(C) 6 days

(D) 4 days

Q7. The simple interest on Rs. 2500 at 8% per annum for 2 years is:

(A) Rs. 200

(B) Rs. 500

(C) Rs. 300

(D) Rs. 400

Q8. The sum of the ages of two people is 50 years and their ages are in the ratio $3 : 2$. The age of the older person is:

(A) 25 years

(B) 30 years

(C) 20 years

(D) 35 years

Q9. A 20% discount is allowed on an article marked at Rs. 500. The selling price is:

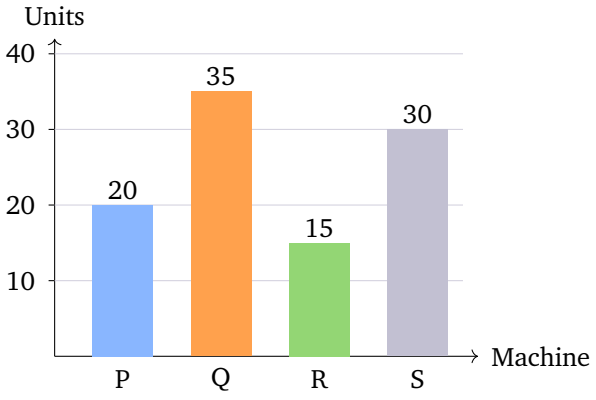
(A) Rs. 400

(B) Rs. 450

(C) Rs. 380

(D) Rs. 420

Q10. The bar chart below shows the number of units produced by four machines P, Q, R and S. The highest production among them is:



(A) 30

(B) 35

(C) 40

(D) 20

Q11. The average weight of 5 people is 50 kg. If one person weighing 60 kg leaves the group, the average weight of the remaining 4 people is:

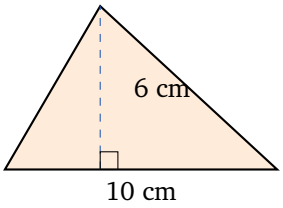
(A) 45 kg

(B) 50 kg

(C) 48 kg

(D) 47.5 kg

Q12. The area of the triangle shown below, with base 10 cm and height 6 cm, is:



(A) 60 cm^2

(B) 16 cm^2

(C) 30 cm^2

(D) 48 cm^2

Q13. 2.5 hours expressed in minutes is:

(A) 150 minutes

(B) 120 minutes

(C) 250 minutes

(D) 100 minutes

Q14. Two trains move towards each other on parallel tracks at 30 km/h and 50 km/h. Their relative speed (the speed at which the gap between them closes) is:

(A) 20 km/h

(B) 40 km/h

(C) 60 km/h

(D) 80 km/h

Q15. The compound interest on Rs. 8000 at 10% per annum for 2 years (compounded annually) is:

(A) Rs. 1600

(B) Rs. 1680

(C) Rs. 800

(D) Rs. 1760

Part B: Logical & Analytical Reasoning

Q16. Find the next number in the series: $5,\ 10,\ 20,\ 40,\ ?$

(A) 80

(B) 60

(C) 70

(D) 100

Q17. Find the next term in the series: $B,\ E,\ H,\ K,\ ?$

(A) M

(B) O

(C) N

(D) L

Q18. In a certain code, RED is written as SFE. In the same code, BLUE is written as:

(A) CMUF

(B) CMVF

(C) CLVF

(D) BMVF

Q19. P is the brother of Q, and Q is the father of R. How is P related to R?

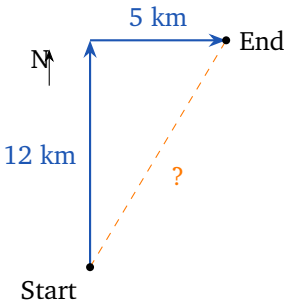
(A) Father

(B) Brother

(C) Grandfather

(D) Uncle

Q20. A person walks 12 km towards the North, then turns right and walks 5 km towards the East, as shown. How far is the person from the starting point?



(A) 17 km

(B) 7 km

(C) 13 km

(D) 60 km

Q21. Choose the option that completes the analogy: **Day : Night :: Up : ?**

(A) Down

(B) High

(C) Top

(D) Above

Q22. Choose the number that does **not** belong with the others: $2,\ 3,\ 5,\ 9$

(A) 2

(B) 3

(C) 5

(D) 9

Q23. Statements: *All metals conduct electricity. Copper is a metal.* Which conclusion necessarily follows?

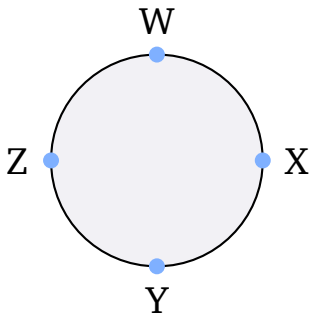
(A) Copper is not a conductor

(B) Copper conducts electricity

(C) Only copper conducts electricity

(D) No metal conducts electricity

Q24. Four people W, X, Y, Z sit around a circular table, placed clockwise in that order, as shown. Who sits directly opposite W?



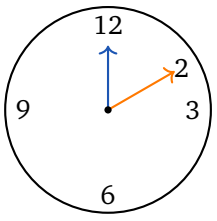
(A) X

(B) Z

(C) Y

(D) W

Q25. The angle between the hour hand and the minute hand of a clock at exactly 2 o'clock, shown below, is:



(A) 60°

(B) 30°

(C) 90°

(D) 45°

Q26. If today is Sunday, then the day of the week 10 days later will be:

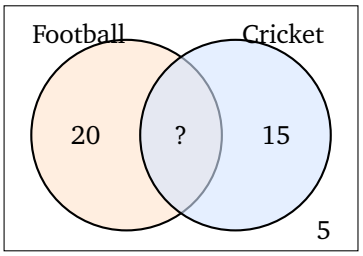
(A) Tuesday

(B) Thursday

(C) Friday

(D) Wednesday

Q27. In a group of 50 students, 30 play football, 25 play cricket and 5 play neither, as in the Venn diagram. How many students play **both** games?



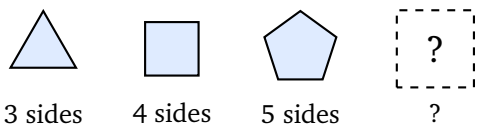
(A) 5

(B) 10

(C) 15

(D) 20

Q28. In the figure series below, each shape has one more side than the previous one. Which figure should come next?



(A) A hexagon (6 sides)

(B) A square (4 sides)

(C) A triangle (3 sides)

(D) A pentagon (5 sides)

Q29. In a row, a student is 10th from the top and 11th from the bottom. The total number of students is:

(A) 21

(B) 22

(C) 20

(D) 19

Q30. If in a certain pattern $3 \rightarrow 12$ and $4 \rightarrow 20$, then $5 \rightarrow ?$

(A) 25

(B) 24

(C) 35

(D) 30

Detailed Solutions

Q1.

Solution

Concept — Expressing one quantity as a percent of another: "What percent of B is A" equals $\frac{A}{B} \times 100$.

Step 1 — Set up the fraction: Here $A = 15$ (the part) and $B = 50$ (the whole).

$$\frac{15}{50}$$

Step 2 — Convert to a percent:

$$\frac{15}{50} \times 100 = \frac{1500}{50} = 30\%$$

Why other options are wrong:

- Option A (35%): does not match $15/50$.
- Option B (25%): would correspond to 12.5 out of 50, not 15.
- Option D (20%): would correspond to 10 out of 50, not 15.

Final Answer: 30% $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q1

Q2.

Solution

Concept — Ratio with a known difference: The difference of the ratio terms corresponds to the difference of the actual numbers.

Step 1 — Find the difference in ratio terms:

$$9 - 7 = 2 \text{ parts}$$

Step 2 — Find the value of one part: The 2 parts equal 10, so

$$1 \text{ part} = \frac{10}{2} = 5$$

Step 3 — Find the smaller number (7 parts):

$$7 \times 5 = 35$$

Why other options are wrong:

- Option B (45): this is the larger number (9×5), not the smaller.
- Option C (40): does not fit the $7 : 9$ ratio.
- Option D (30): would make 1 part ≈ 4.3, not consistent with a difference of 10.

Final Answer: $35 \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q2

Q3.

Solution

Concept — Cost price from selling price and profit: $\text{SP} = \text{CP} \times \left(1 + \dfrac{\text{profit\%}}{100}\right)$.

Step 1 — Write the profit factor: A 20% profit means $\text{SP} = 1.20 \times \text{CP}$.

Step 2 — Substitute the selling price:

$$240 = 1.20 \times \text{CP}$$

Step 3 — Solve for CP:

$$\text{CP} = \frac{240}{1.20} = 200$$

Why other options are wrong:

- Option A (180): would give an SP of 216 at 20% profit, not 240.
- Option B (220): does not satisfy $1.20 \times \text{CP} = 240$.
- Option C (192): wrongly takes 20% *of* the SP.

Final Answer: Rs. 200 $\Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q3

Q4.

Solution

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

Step 1 — Add the three numbers:

$$12 + 15 + 18 = 45$$

Step 2 — Divide by the count (3):

$$\frac{45}{3} = 15$$

Why other options are wrong:

- Option A (16): would need a total of 48.
- Option C (14): would need a total of 42.
- Option D (17): would need a total of 51.

Final Answer: $15 \Rightarrow \boxed{\text{B}}$

Answer: (B) Go Back to Q4

Q5.

Solution

Concept — Distance from speed and time: Distance $=$ Speed $\times$ Time.

Step 1 — Substitute the values:

$$\text{Distance} = 60 \times 3$$

Step 2 — Compute:

$$60 \times 3 = 180 \text{ km}$$

Why other options are wrong:

- Option B (120): corresponds to only 2 hours at 60 km/h.
- Option C (200): does not equal 60×3.
- Option D (150): corresponds to 2.5 hours at 60 km/h.

Final Answer: 180 km $\Rightarrow \boxed{\text{A}}$

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:

$$\text{A's rate} = \frac{1}{8}, \qquad \text{B's rate} = \frac{1}{24}$$

Step 2 — Add the rates (common denominator 24):

$$\frac{1}{8} + \frac{1}{24} = \frac{3}{24} + \frac{1}{24} = \frac{4}{24} = \frac{1}{6}$$

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 B (8): larger than the combined work should take.
- Option D (4): would require a combined rate of $1/4$, more than the actual $1/6$.

Final Answer: 6 days $\Rightarrow$ C

Answer: (C) Go Back to Q6

Q7.

Solution

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

Step 1 — Substitute $P = 2500$, $R = 8$, $T = 2$:

$$\text{SI} = \frac{2500 \times 8 \times 2}{100}$$

Step 2 — Compute the numerator:

$$2500 \times 8 \times 2 = 40000$$

Step 3 — Divide by 100:

$$\frac{40000}{100} = 400$$

Why other options are wrong:

- Option A (200): uses $T = 1$ year only.
- Option B (500): does not match the formula.
- Option C (300): uses $R = 6$ instead of 8.

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

Answer: (D) Go Back to Q7

Q8.

Solution

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

Step 1 — Find the total number of parts:

$$3 + 2 = 5 \text{ parts}$$

Step 2 — Find the value of one part:

$$\frac{50}{5} = 10 \text{ years}$$

Step 3 — Find the older person's age (3 parts):

$$3 \times 10 = 30 \text{ years}$$

Why other options are wrong:

- Option A (25): an equal split, ignoring the $3 : 2$ ratio.
- Option C (20): this is the younger person's age (2×10).
- Option D (35): exceeds the correct share for 3 parts of 50.

Final Answer: 30 years $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q8

Q9.

Solution

Concept — Discount on marked price: $\text{SP} = \text{MP} \times \left(1 - \dfrac{\text{discount\%}}{100}\right)$.

Step 1 — Write the discount factor: A 20% discount means $\text{SP} = 0.80 \times \text{MP}$.

Step 2 — Substitute MP $= 500$:

$$\text{SP} = 0.80 \times 500$$

Step 3 — Compute:

$$0.80 \times 500 = 400$$

Why other options are wrong:

- Option B (450): corresponds to a 10% discount.
- Option C (380): an over-discount.
- Option D (420): corresponds to a 16% discount.

Final Answer: Rs. 400 $\Rightarrow$ A

Answer: (A) Go Back to Q9

Q10.

Solution

Concept — Reading a bar chart: The height of each bar gives the value for that category; the tallest bar is the highest value.

Step 1 — Read each bar's value:

$$P = 20, \quad Q = 35, \quad R = 15, \quad S = 30$$

Step 2 — Pick the largest: The greatest of $20, 35, 15, 30$ is 35 (machine Q).

Why other options are wrong:

- Option A (30): the value for S, the second-tallest bar.
- Option C (40): no bar reaches 40.

- Option D (20): the value for P, well below Q.

Final Answer: 35 $\Rightarrow$ B

Answer: (B) Go Back to Q10

Q11.

Solution

Concept — Average and total: Total = average $\times$ count; remove the leaving value, then re-average.

Step 1 — Find the total weight of the 5 people:

$$5 \times 50 = 250 \text{ kg}$$

Step 2 — Remove the person weighing 60 kg:

$$250 - 60 = 190 \text{ kg}$$

Step 3 — Average the remaining 4 people:

$$\frac{190}{4} = 47.5 \text{ kg}$$

Why other options are wrong:

- Option A (45): would need a remaining total of 180.
- Option B (50): the average is unchanged only if the removed value equals 50.
- Option C (48): would need a remaining total of 192.

Final Answer: 47.5 kg $\Rightarrow$ D

Answer: (D) Go Back to Q11

Q12.

Solution

Concept — Area of a triangle: $A = \frac{1}{2} \times \text{base} \times \text{height}$.

Step 1 — Substitute base $= 10$ and height $= 6$:

$$A = \frac{1}{2} \times 10 \times 6$$

Step 2 — Compute:

$$\frac{1}{2} \times 60 = 30 \text{ cm}^2$$

Why other options are wrong:

- Option A (60): forgets the factor $\frac{1}{2}$ (this is just base $\times$ height).
- Option B (16): adds base and height instead of multiplying.
- Option D (48): an incorrect product.

Final Answer: $30 \text{ cm}^2 \Rightarrow$ C

Answer: (C) Go Back to Q12

Q13.

Solution

Concept — Hours to minutes: Multiply the number of hours by 60.

Step 1 — Apply the conversion:

$$2.5 \times 60$$

Step 2 — Compute:

$$2.5 \times 60 = 150 \text{ minutes}$$

Why other options are wrong:

- Option B (120): corresponds to 2 hours.
- Option C (250): multiplies by 100 instead of 60.
- Option D (100): does not equal 2.5×60.

Final Answer: 150 minutes $\Rightarrow$ A

Answer: (A) Go Back to Q13

Q14.

Solution

Concept — Relative speed (opposite directions): When two bodies move towards each other, their relative speed is the *sum* of their speeds.

Step 1 — Identify the speeds: First train $= 30$ km/h, second train $= 50$ km/h, moving towards each other.

Step 2 — Add the speeds:

$$30 + 50 = 80 \text{ km/h}$$

Why other options are wrong:

- Option A (20): this is the difference, used for the *same* direction.
- Option B (40): the average of the two speeds, not the relative speed.
- Option C (60): does not equal the sum $30 + 50$.

Final Answer: 80 km/h $\Rightarrow$ D

Answer: (D) Go Back to Q14

Q15.

Solution

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

Step 1 — Substitute $P = 8000$, $R = 10$, $T = 2$:

$$\text{CI} = 8000\left[(1.1)^2 - 1\right]$$

Step 2 — Evaluate $(1.1)^2$:

$$(1.1)^2 = 1.21$$

Step 3 — Compute:

$$8000 \times (1.21 - 1) = 8000 \times 0.21 = 1680$$

Why other options are wrong:

- Option A (1600): this is the simple interest ($8000 \times 10\% \times 2$), omitting interest on interest.

- Option C (800): only one year's simple interest.
- Option D (1760): an over-estimate.

Final Answer: Rs. 1680 $\Rightarrow$ B

Answer: (B) Go Back to Q15

Q16.

Solution

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

Step 1 — Find the ratios:

$$\frac{10}{5} = 2, \quad \frac{20}{10} = 2, \quad \frac{40}{20} = 2$$

Each term is double the previous one.

Step 2 — Double the last term:

$$40 \times 2 = 80$$

Why other options are wrong:

- Option B (60): adds 20, but the pattern is multiplication, not addition.
- Option C (70): does not fit the $\times 2$ rule.
- Option D (100): not a doubling of 40.

Final Answer: 80 $\Rightarrow$ A

Answer: (A) Go Back to Q16

Q17.

Solution

Concept — Letter series by position: Convert letters to positions and track the gaps.

Step 1 — Write positions:

$$B = 2,\ E = 5,\ H = 8,\ K = 11$$

Step 2 — Find the gaps:

$$5-2=3, \quad 8-5=3, \quad 11-8=3$$

The gap is a constant 3.

Step 3 — Find the next letter:

$$11+3=14 \Rightarrow \text{ the 14th letter is } N$$

Why other options are wrong:

- Option A (M): position 13, a gap of only 2.
- Option B (O): position 15, a gap of 4.
- Option D (L): position 12, a gap of 1.

Final Answer: N $\Rightarrow$ C

Answer: (C) Go Back to Q17

Q18.

Solution

Concept — Letter-shift coding: Compare RED with SFE to find the rule.

Step 1 — Find the shift:

$$R \to S, \; E \to F, \; D \to E$$

Each letter moves forward by one position $(+1)$.

Step 2 — Apply $+1$ to each letter of BLUE:

$$B \to C, \; L \to M, \; U \to V, \; E \to F$$

Step 3 — Read the code:

$$\text{BLUE} \to \text{CMVF}$$

Why other options are wrong:

- Option A (CMUF): leaves U unchanged instead of shifting to V.
- Option C (CLVF): leaves L unchanged instead of shifting to M.
- Option D (BMVF): leaves B unchanged instead of shifting to C.

Final Answer: CMVF $\Rightarrow$ B

Answer: (B) Go Back to Q18

Q19.

Solution

Concept — Tracing a family link: Follow the relationships from P to R.

Step 1 — Note the given links: P is the brother of Q; Q is the father of R.

Step 2 — Place P relative to R: Q is R's father, so P (Q's brother) is R's father's brother.

Step 3 — Name the relation: The brother of one's father is one's *uncle*.

Why other options are wrong:

- Option A (Father): R's father is Q, not P.
- Option B (Brother): P is the brother of Q, not of R.
- Option C (Grandfather): that would be one generation further back.

Final Answer: Uncle $\Rightarrow$ D

Answer: (D) Go Back to Q19

Q20.

Solution

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

Step 1 — Identify the two legs: North leg $= 12$ km, East leg $= 5$ km, meeting at a right angle.

Step 2 — Apply the Pythagoras theorem:

$$d = \sqrt{12^2 + 5^2} = \sqrt{144 + 25} = \sqrt{169}$$

Step 3 — Simplify:

$$d = 13 \text{ km}$$

Why other options are wrong:

- Option A (17): adds the legs $12+5$, the path length, not the straight distance.

- Option B (7): subtracts the legs $12 - 5$.
- Option D (60): multiplies the legs 12×5.

Final Answer: 13 km $\Rightarrow$ C

Answer: (C) Go Back to Q20

Q21.

Solution

Concept — Opposite-pair analogy: Day and Night are opposites; find the opposite of "Up."

Step 1 — Identify the relationship: Day $\rightarrow$ Night means "its direct opposite."

Step 2 — Apply to "Up": The direct opposite of Up is *Down*.

Why other options are wrong:

- Option B (High): a synonym-like word, not the opposite.
- Option C (Top): a position related to Up, not its opposite.
- Option D (Above): another word meaning Up, not its opposite.

Final Answer: Down $\Rightarrow$ A

Answer: (A) Go Back to Q21

Q22.

Solution

Concept — Common property test: Check whether all the numbers share a property; the exception is the odd one out.

Step 1 — Test for primality: $2, 3, 5$ are prime numbers (divisible only by 1 and themselves).

Step 2 — Examine 9: $9 = 3 \times 3$ is composite, not prime.

Step 3 — Conclude: 9 does not share the "prime" property, so it is the odd one out.

Why other options are wrong:

- Options A (2), B (3), C (5): all are prime, so they belong together.

Final Answer: 9 $\Rightarrow$ D

Answer: (D) Go Back to Q22

Q23.

Solution

Concept — Applying a universal statement to a member: If "All A are B" and "x is an A," then "x is a B."

Step 1 — Identify the rule and the member: Rule: all metals conduct electricity. Member: copper is a metal.

Step 2 — Apply the rule to copper: Since copper is a metal and every metal conducts electricity, copper conducts electricity.

Why other options are wrong:

- Option A (not a conductor): directly contradicts the rule.
- Option C (only copper conducts): the statements never say copper is the *only* conductor.
- Option D (no metal conducts): contradicts the first statement.

Final Answer: Copper conducts electricity $\Rightarrow$ $\boxed{\text{B}}$

Answer: (B) Go Back to Q23

Q24.

Solution

Concept — Opposite seat at a round table: With 4 people evenly placed, each person's opposite is two seats away (the one across the centre).

Step 1 — Place the four people clockwise: W (top), X (right), Y (bottom), Z (left).

Step 2 — Find who is across from W: W is at the top; the seat directly across the centre is the bottom, which holds Y.

Why other options are wrong:

- Option A (X): sits to W's right (adjacent), not opposite.
- Option B (Z): sits to W's left (adjacent), not opposite.
- Option D (W): a person cannot be opposite to themselves.

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

Answer: (C) 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 2 o'clock: At exactly 2:00 the minute hand is at 12 and the hour hand is at 2, two marks apart.

Step 2 — Multiply by $30°$:

$$2 \times 30^\circ = 60^\circ$$

Why other options are wrong:

- Option B ($30°$): one hour gap (as at 1 o'clock).
- Option C ($90°$): three hour gaps (as at 3 o'clock).
- Option D ($45°$): not a whole multiple of $30°$ for an exact hour.

Final Answer: $60^\circ \Rightarrow \boxed{\text{A}}$

Answer: (A) Go Back to Q25

Q26.

Solution

Concept — Days of the week using remainders: Advance by the number of days modulo 7.

Step 1 — Reduce 10 days modulo 7:

$$10 \div 7 = 1 \text{ remainder } 3$$

So 10 days later is the same as 3 days later.

Step 2 — Advance Sunday by 3 days:

$$\text{Sunday} \rightarrow \text{Mon} \rightarrow \text{Tue} \rightarrow \text{Wednesday}$$

Why other options are wrong:

- Option A (Tuesday): advances by only 2 days.
- Option B (Thursday): advances by 4 days.
- Option C (Friday): advances by 5 days.

Final Answer: Wednesday $\Rightarrow$ D

Answer: (D) Go Back to Q26

Q27.

Solution

Concept — Inclusion–exclusion: $n(\text{Football or Cricket}) = n(\text{Football}) + n(\text{Cricket}) - n(\text{both})$.

Step 1 — Count those who play at least one game: 5 students play neither, so

$$50 - 5 = 45 \text{ play at least one game}$$

Step 2 — Apply inclusion–exclusion to find "both":

$$45 = 30 + 25 - n(\text{both})$$

$$45 = 55 - n(\text{both})$$

Step 3 — Solve:

$$n(\text{both}) = 55 - 45 = 10$$

Why other options are wrong:

- Option A (5): this is the "neither" count, not "both."
- Option C (15): would make the union 40, leaving 10 playing neither.
- Option D (20): would make the union only 35, leaving 15 playing neither.

Final Answer: $10 \Rightarrow$ B

Answer: (B) Go Back to Q27

Q28.

Solution

Concept — Side-count progression: Identify how the number of sides changes from one figure to the next.

Step 1 — Count the sides in order: Triangle (3), square (4), pentagon (5). Each figure has one more side than the previous.

Step 2 — Predict the next figure:

$$5 + 1 = 6 \text{ sides } \Rightarrow \text{ a hexagon}$$

Why other options are wrong:

- Option B (square, 4 sides): already used as the second figure.
- Option C (triangle, 3 sides): the first figure, going backwards.
- Option D (pentagon, 5 sides): the third figure, with no increase.

Final Answer: A hexagon (6 sides) $\Rightarrow$ $\boxed{\text{A}}$

Answer: (A) Go Back to Q28

Q29.

Solution

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

Step 1 — Substitute the ranks:

$$\text{Total} = 10 + 11 - 1$$

Step 2 — Compute:

$$= 20$$

The "-1" avoids counting the student twice.

Why other options are wrong:

- Option A (21): forgets to subtract 1.
- Option B (22): adds an extra and omits the subtraction.
- Option D (19): subtracts 2 instead of 1.

Final Answer: 20 $\Rightarrow$ $\boxed{\text{C}}$

Answer: (C) Go Back to Q29

Q30.

Solution

Concept — Number pattern: Each number n maps to $n \times (n+1)$.

Step 1 — Verify the rule:

$$3 \to 3 \times 4 = 12, \qquad 4 \to 4 \times 5 = 20$$

So the rule is $n \to n(n+1)$.

Step 2 — Apply to 5:

$$5 \to 5 \times 6 = 30$$

Why other options are wrong:

- Option A (25): this is 5^2, the wrong rule.
- Option B (24): does not equal 5×6.
- Option C (35): this is 5×7, off by one factor.

Final Answer: $30 \Rightarrow \boxed{\text{D}}$

Answer: (D) Go Back to Q30

Answer Key

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