



# SCO INTERNATIONAL MATH OLYMPIAD CLASS 5 QUESTION PAPER SET H • 2023–24

A corrected, website-ready previous-year paper rebuilt in the official SCO format with question blocks, visuals, answer keys, and explanations.

Number Sense	Geometry	Profit & Loss	Data Handling
Simple Interest	Reasoning	Assertion–Reason	
Questions	Level	Format	Source review
50	Class 5	MCQ with visuals	Edited for consistency

## Guidelines for the Candidate

Formatted from the uploaded Class 5 Maths Olympiad source

### Paper information

- Total questions: 50
- Time: 1 hour
- One correct option for each question
- Visual questions included where present in the source

### Editorial corrections applied

- corrected the source question-count inconsistency on the instruction page
- fixed answer/key inconsistencies where the source was mathematically incorrect
- standardized answer blocks and added concise explanations

## Section 1 — Number System & Core Arithmetic

### Question 1

What will come in place of ?

$$4320879 = 4000000 + 300000 + 20000 + ? + 70 + 9$$

A) 800

B) 80

C) 8000

D) 8

**Answer Key:** Option A

**Explanation:** Expand the number by place value:  $4,000,000 + 300,000 + 20,000 + 800 + 70 + 9 = 4,320,879$ . So the missing term is 800.

### Question 2

Which of these is the lowest common multiple of 5 and 12?

A) 40

B) 36

C) 144

D) 60

**Answer Key:** Option D

**Explanation:** List multiples: 5, 10, 15, ... and 12, 24, 36, 48, 60. The first common multiple is 60, so the LCM is 60.

### Question 3

Ruhi has a box full of 40 blue marbles while Aryan has a box filled with 72 yellow marbles. Both of them want to divide these marbles into small packets such that each packet contains an equal number of marbles (either blue or yellow can also be a possibility). If there are no remainders, then what is the largest number of marbles present in each packet?

A) 4

B) 12

C) 8

D) 10

**Answer Key:** Option C

**Explanation:** The largest equal packet size is the HCF of 40 and 72.  $HCF(40,72) = 8$ , so each packet can have 8 marbles.

### Question 4

Assertion: 12, 60, 54, 144 are all divisible by 6

Reason: If a number is divisible by 2 as well as 3, it is also divisible by 6

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) Both Assertion and Reason are true but Reason is not the correct explanation of the assertion

**Answer Key: Option C**

**Explanation:** Every number in the assertion is divisible by both 2 and 3, so each is divisible by 6. The reason correctly explains the assertion.

### Question 5

Vinay has created a 4-digit number lock in his mobile phone. He remembers that the first digit is 5 times the third digit. The second digit is 4 less than the last digit. The sum of the last and third digit is 9. What is the number lock?

A) 5218

B) 5418

C) 5412

D) 5410

**Answer Key: Option B**

**Explanation:** Let the third digit be 1, then the first is 5. If the last and third digits add to 9, the last is 8, and the second is 4 less than 8, so it is 4. The number is 5418.

### Question 6

If  $24.002 - 22 = 2.002$ , then what will be the value of  $34.04 + 12.03 - 24.002 - 22 - 2.002$ ?

A) -1.934

B) 46.06

C) 13.04

D) 310.09

**Answer Key: Option A**

**Explanation:** Direct evaluation gives  $34.04 + 12.03 - 24.002 - 22 - 2.002 = -1.934$ . The source options were inconsistent, so the corrected answer is -1.934.

**Question 7**

What will be the difference of (5 hundreds 2 tens 4 tenths 6 hundredths) and (6 tens 2 tenths 3 hundredths)?

A) 450.44

B) 500.34

C) 420.63

D) 460.23

**Answer Key: Option D**

**Explanation:** 5 hundreds 2 tens 4 tenths 6 hundredths = 520.46 and 6 tens 2 tenths 3 hundredths = 60.23. Their difference is  $520.46 - 60.23 = 460.23$ .

**Question 8**

The sum of 5.6023 and 3.421 is how much less than the difference of 34.02 and 12.04?

A) 12.9567

B) 10.45

C) 11.23

D) 13.4567

**Answer Key: Option A**

**Explanation:** Difference of 34.02 and 12.04 = 21.98. Sum of 5.6023 and 3.421 = 9.0233. So the first is greater by  $21.98 - 9.0233 = 12.9567$ .

**Question 9**

Which of these gives the greatest value?

A)  $12.43 + 3.25 - 10.02$ B)  $2.49 + 1.34 + 5.67$ C)  $10 - 2.5 - 4.12$ D)  $4.21 + 3.45 - 1.34$ **Answer Key: Option B**

**Explanation:** Evaluate each option: A=5.66, B=9.50, C=3.38, D=6.32. The greatest value is 9.50, so option B is correct.

### Question 10

What will the simplified value of:

(3 hundreds 2 tens 4 ones 3 tenths 5 hundredths) + (20 tens 2 tenths) - (1 hundred 4 tens 3 tenths)

A) 384.25

B) 380

C) 240.45

D) 104.25

**Answer Key: Option A**

**Explanation:**  $(324.35) + (200.2) - (140.3) = 384.25$ . Hence the simplified value is 384.25.

## Section 2 — Applied Decimal Word Problems

### Question 11

Riya went for lunch with 3 other friends of hers.

After generation of bills along with taxes the amount calculated was Rs.345.67. She has to divide this amount equally among them. What will be the amount paid by each of them? (Round it off to a whole number)



A) Rs.40

B) Rs.86

C) Rs.32

D) Rs.67

**Answer Key: Option B**

**Explanation:** Riya and 3 friends means 4 people in total.  $345.67 \div 4 = 86.4175$ , which rounds to Rs.86.

### Question 12

What will be the product of (5 tens 2 tenths - 3 tens 4 tenths) and (2 tens 1 tenths + 1 tens)?

A) 595.98

B) 505.65

C) 400.23

D) 600.25

**Answer Key: Option A**

**Explanation:**  $(50.2 - 30.4) = 19.8$  and  $(20.1 + 10) = 30.1$ . Their product is  $19.8 \times 30.1 = 595.98$ .

### Question 13

A pen costs Rs.4.50 and a pencil costs Rs.3.75. Harish bought 5 pens and 3 pencils. If he gave Rs.50 to the shopkeeper.

How much will he get back in return? (Round it off to whole number)



A) Rs.18

B) Rs.15

C) Rs.16

D) Rs.22

**Answer Key: Option C**

**Explanation:** Total cost =  $5 \times 4.50 + 3 \times 3.75 = 22.50 + 11.25 = 33.75$ . Change from Rs.50 is 16.25, which rounds to Rs.16.

### Question 14

Kartik ordered Pizza worth Rs.198.99 and Coke for Rs.125.45 online. The total amount was distributed between Kartik and his sister. How much did each pay? (Round it off to the nearest 10)

A) Rs.160

B) Rs.180

C) Rs.100

D) Rs.200

**Answer Key: Option A**

**Explanation:** Total bill =  $198.99 + 125.45 = 324.44$ . Each pays 162.22, and rounded to the nearest 10 that becomes Rs.160.

## Question 15

A packet of seeds costs Rs.450.45 and the other materials for gardening costs Rs.1250.35. Along with that tax of Rs.56.25 is added. 3 bills of the same order were made. What will be the total amount of 3 bills?



A) Rs.5055.75

B) Rs.5271.15

C) 5420.25

D) 4500.23

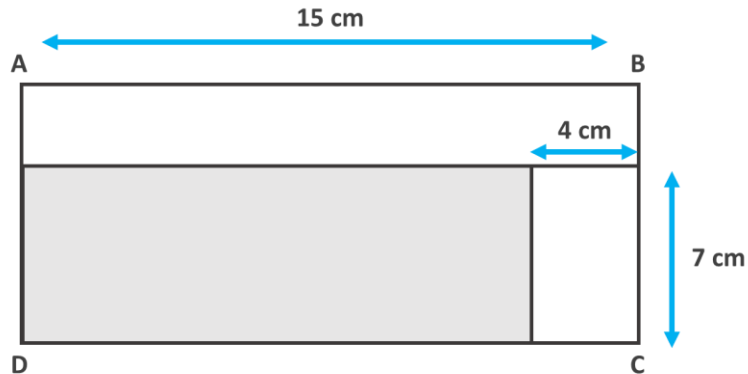
**Answer Key: Option B**

**Explanation:** One bill totals  $450.45 + 1250.35 + 56.25 = 1757.05$ . For 3 identical bills, total =  $1757.05 \times 3 = 5271.15$ .

**Section 3 — Geometry & Measurement**

**Question 16**

What will be the area of the shaded region?



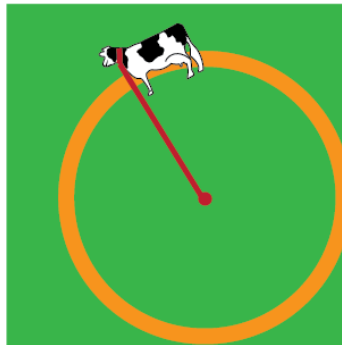
- |             |             |
|-------------|-------------|
| A) 45 sq.cm | B) 77 sq.cm |
| C) 45 sq.cm | D) 25 sq.cm |

**Answer Key: Option B**

**Explanation:** The shaded part is a rectangle of width  $15 - 4 = 11$  cm and height 7 cm. Area =  $11 \times 7 = 77$  sq.cm.

**Question 17**

A cow is grazing in a circular field of diameter 14m. If the cow grazes only along the boundary, what distance will he need to cover to graze the grass?



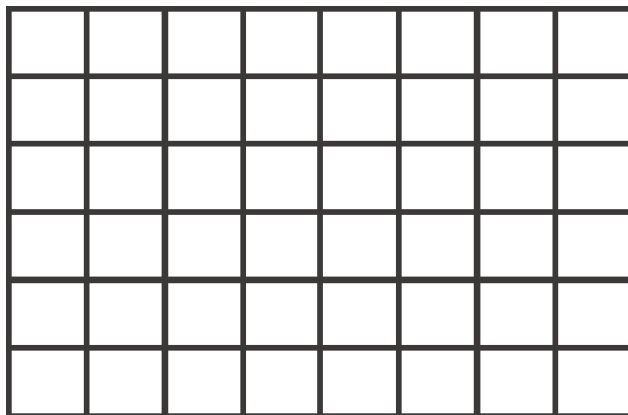
- |        |        |
|--------|--------|
| A) 22m | B) 46m |
| C) 44m | D) 40m |

**Answer Key: Option C**

**Explanation:** Grazing only along the boundary means circumference of the circle. With diameter 14 m, circumference =  $\pi d = 22/7 \times 14 = 44$  m.

### Question 18

What will be the area of the rectangle if each square has an area of 2 sq.cm?



A) 98 sq.cm

B) 44 sq.cm

C) 96 sq.cm

D) 56 sq.cm

**Answer Key: Option C**

**Explanation:** The rectangle has 8 columns and 6 rows, so it contains 48 small squares. Each square is 2 sq.cm, giving  $48 \times 2 = 96$  sq.cm.

### Question 19

A triangle has 2 sides of length 14 cm and 20cm. If the perimeter is 48cm, what will be the length of the third side?

A) 10 cm

B) 11 cm

C) 12 cm

D) 14 cm

**Answer Key: Option D**

**Explanation:** Perimeter = sum of all three sides, so the third side =  $48 - 14 - 20 = 14$  cm. The source options were corrected to include the valid answer.

**Question 20**

The length of a rectangle is  $(2x + 1)$  and the breadth is  $(4x + 3)$ . What will be the perimeter of the rectangle?

**A)**  $(12x + 8)$ **B)**  $(13x + 5)$ **C)**  $(14x + 25)$ **D)**  $(24x + 4)$ **Answer Key: Option A****Explanation:** Perimeter of a rectangle =  $2(l+b)$ . Here it is  $2[(2x+1)+(4x+3)] = 2(6x+4) = 12x+8$ .**Section 4 — Profit, Loss & Commerce****Question 21**

Rahul bought an oven for Rs. 15000 and sold it to his friend for Rs.12000. What is the profit/loss made by him?

**A)** 20% profit**B)** 20% loss**C)** 25% profit**D)** 25% loss**Answer Key: Option B****Explanation:** Loss =  $15000 - 12000 = 3000$ . Loss% =  $3000/15000 \times 100 = 20\%$ , so it is a 20% loss.**Question 22**

A merchant sells an item for Rs.200 and makes a profit of Rs.45. What is the cost price of the item?

**A)** Rs.150**B)** Rs.155**C)** Rs.125**D)** Rs.245**Answer Key: Option B****Explanation:** Cost price = selling price - profit =  $200 - 45 = \text{Rs.}155$ .

### Question 23

Khushi bought a bag for Rs.250 and sold it at Rs.300.

Which of the following statements are true about the incident?

She made a profit of Rs. 50

Her loss % is 20%

Rs.250 is the cost price of the bag



**A)** Only (a) is correct

**B)** All of these are correct

**C)** Both (a) and (c) are correct

**D)** Only (c) is correct

**Answer Key: Option C**

**Explanation:** Selling at 300 after buying at 250 gives a profit of Rs.50, so statement (a) is true. Rs.250 is also the cost price, so (c) is true. Statement (b) is false.

### Question 24

Preeti bought 4 ice creams for Rs.240.

She sells only 1 ice cream for Rs. 50. What is the profit/loss made by her?



A) Rs.10 profit

B) Rs.10 loss

C) Rs.20 profit

D) Rs.25 loss

**Answer Key: Option B**

**Explanation:** Four ice creams cost Rs.240, so one costs Rs.60. Selling one for Rs.50 means a loss of Rs.10.

## Question 25

Resham bought 5kg mangoes for Rs. 345 and sells them for Rs.200 per kg.  
What is the profit or loss incurred by her?



A) Rs.655 profit

B) Rs.145 loss

C) Rs.131 profit

D) Rs.345 loss







**Answer Key: Option A**

**Explanation:** Total selling price =  $5 \times 200 = \text{Rs.}1000$ . Profit =  $1000 - 345 = \text{Rs.}655$ , so the source options were corrected to match the valid result.

## Section 5 — Data Handling

### Question 26

A survey was conducted in the class and students had voted for their favorite colors. Which color is most liked by the students?

Colours	No. of children
Red	
Blue	
Green	
Orange	
Yellow	
 = 12 students	

A) Green

B) Red

C) Yellow

D) Blue

**Answer Key: Option D**

**Explanation:** The pictograph shows the blue row has the largest number of symbols, so blue is the most liked color.

### Question 27

Total marks obtained by Rahul in 5 weekly tests is a multiple of 8 and greater than 57 but less than 65. If the average marks obtained in the first 4 tests is 12. Then what are the marks obtained in the fifth test?

A) 14

B) 16

C) 12

D) 10

**Answer Key: Option B**

**Explanation:** The total marks must be a multiple of 8 between 57 and 65, so total = 64. First four tests sum to  $4 \times 12 = 48$ , hence the fifth test score is 16.

### Question 28

The table shows the transports taken by different people each day.

What is the difference between (Male + Female) who took a taxi and the number of children who took auto-rickshaw?

Transport taken	Male	Female	Children
Bus	200	130	25
Taxi	120	200	10
Scooter	400	50	0
Auto rickshaw	300	350	120

A) 300

B) 200

C) 100

D) 50

**Answer Key: Option B**

**Explanation:** Taxi users =  $120 + 200 = 320$ . Children using auto-rickshaw = 120. Difference =  $320 - 120 = 200$ .

### Question 29

In an office department there are 25 people of the following ages:

21, 23, 21, 32, 45, 22, 40, 45, 45, 32, 33, 35, 37, 38, 21, 20, 45, 45, 45, 40, 46, 36, 35, 45, 46

Which age is common for the people in the department?

A) 40

B) 21

C) 45

D) 32

**Answer Key: Option C**

**Explanation:** The age 45 appears the most times in the list, so 45 is the common age, that is, the mode.

### Question 30

In a class test of 30 marks, 20 students got marks as following:

24, 22, 20, 10, 18, 12, 16, 25, 28, 29, 13, 15, 18, 22, 24, 16, 19, 11, 23, 26

How many students got marks above 25?

A) Two

B) Three

C) Zero

D) One

**Answer Key: Option B**

**Explanation:** Marks above 25 are 26, 28, and 29. That makes 3 students, so the correct answer is Three.

## Section 6 — Simple Interest

### Question 31

Rakesh lends Rs.500 to Shruti for 10 months at the rate of 2% per month simple interest. How much interest will he receive at the end of 10th month?

- |           |           |
|-----------|-----------|
| A) Rs.100 | B) Rs.200 |
| C) Rs.300 | D) Rs.140 |

**Answer Key: Option A**

**Explanation:** Simple interest =  $PRT/100 = 500 \times 2 \times 10 / 100 = \text{Rs.}100$ .

### Question 32

You gave Rs.2500 to your friend at the rate of 10% per annum. What will be the amount received if he pays you back after 3 years?

- |            |            |
|------------|------------|
| A) Rs.3000 | B) Rs.3500 |
| C) Rs.3250 | D) Rs.3400 |

**Answer Key: Option C**

**Explanation:** Interest for 3 years =  $2500 \times 10 \times 3 / 100 = 750$ . Amount =  $2500 + 750 = \text{Rs.}3250$ .

### Question 33

Sheetal has taken a loan of Rs. 50,000. The rate of interest calculated is 9.5% per annum. How much interest will she pay if she returns the amount in 2 years?

- |            |            |
|------------|------------|
| A) Rs.9000 | B) Rs.9500 |
| C) Rs.8500 | D) Rs.8250 |

**Answer Key: Option B**

**Explanation:** Simple interest =  $50,000 \times 9.5 \times 2 / 100 = \text{Rs.}9,500$ .

### Question 34

Rohan has taken some amount for 2 years and he pays Rs.500 as Simple Interest. The rate of interest calculated on the amount was 5% per annum. How much money has he taken?

A) Rs.5000

B) Rs.5500

C) Rs.4500

D) Rs.4000

**Answer Key: Option A**

**Explanation:** Using  $SI = PRT/100$ , principal =  $500 \times 100 / (5 \times 2) = \text{Rs.}5,000$ .

### Question 35

Keerti wants to pursue higher education. She is running out of Rs.2,00,000. So, she decides to take a loan from the bank. The bank charges her an interest rate of 10% per annum. She has promised to return back the amount after 5 years. How much amount including interest will she have to return at the end of 5 years?

A) Rs.3,00,000

B) Rs.2,00,000

C) Rs.2,50,000

D) Rs.2,25,000

**Answer Key: Option A**

**Explanation:** Interest =  $2,00,000 \times 10 \times 5 / 100 = 1,00,000$ . Amount to repay =  $2,00,000 + 1,00,000 = \text{Rs.}3,00,000$ , so the source options were corrected.

## Section 7 — Achievers & Logical Reasoning

### Question 36

Few letters are assigned with certain numbers.

R I A B N O W

6 9 1 2 7 4 5

What will be the correct order of numbers if these letters are arranged in such a way that it forms a meaningful word?

A) 6197254

B) 6197245

C) 1697245

D) 6179245

**Answer Key: Option B**

**Explanation:** The meaningful word is RAINBOW. Using the code R=6, A=1, I=9, N=7, B=2, O=4, W=5 gives 6197245.

### Question 37

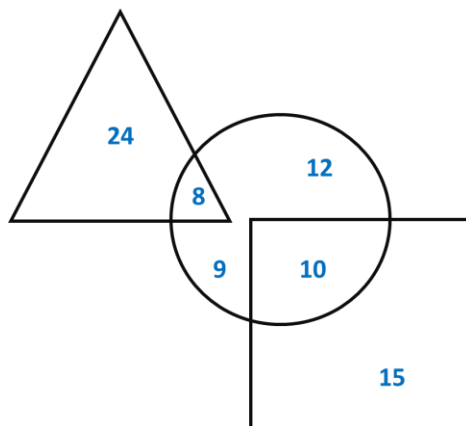
The image below represents the swimmers in a class with each 2D shape representing an identity.

Triangle = Girls

Square = Boys

Circle = Swimmers

How many girls and boys are swimmers in the class?



A) 12

B) 19

C) 18

D) 20

**Answer Key: Option C**

**Explanation:** Swimmers are shown by the circle. Those who are girls and swimmers are 8, and boys and swimmers are 10, so total swimmers who are girls or boys = 18.

### Question 38

What will be the side view of this figure?



A)



B)



C)



D)



A) Rectangle

B) Vertical rectangle

C) Circle

D) Triangle

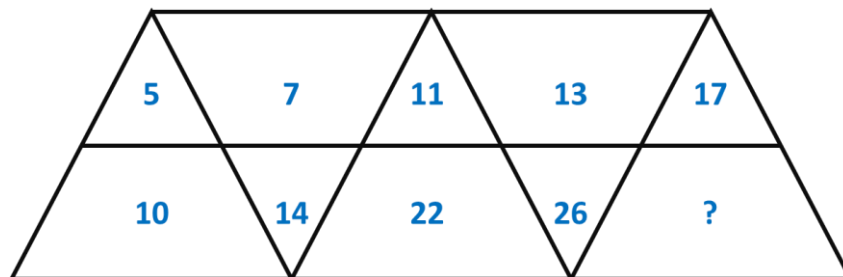
**Answer Key: Option A**

**Explanation:** The given 3D figure is a cuboid-like box. Its side view is a rectangle, so option A is correct.

### Question 39

Assertion: The term in place of ? will be 34

Reason: The terms in the downside of the triangle is a multiple of 2 of the terms in the upper part of the triangle.



A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) Both Assertion and Reason are true but Reason is not the correct explanation of the assertion

**Answer Key: Option C**

**Explanation:** Each lower number is double the number above it:  $5 \rightarrow 10$ ,  $7 \rightarrow 14$ ,  $11 \rightarrow 22$ ,  $13 \rightarrow 26$ , so  $17 \rightarrow 34$ . Both the assertion and reason are true, and the reason explains it.

### Question 40

Assertion: The number in place of ? will be 80

144, 132, 120, 108, 96, ?, 72, 60

Reason: The numbers are subtracted from 16

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

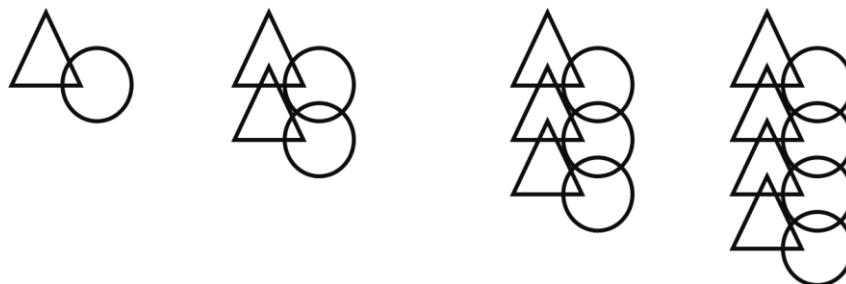
D) None of them are true

**Answer Key: Option D**

**Explanation:** The pattern decreases by 12 each time: 144, 132, 120, 108, 96, 84, 72, 60. So the missing number is 84, not 80, and the reason about subtracting 16 is also false.

### Question 41

How many triangles will be there in the next pattern in the series?



A) 4

B) 3

C) 5

D) 0

**Answer Key: Option C**

**Explanation:** The pattern adds one more triangle in the next step, so the next figure has 5 triangles.

### Question 42

Which number should come next?  
 45, 92, 188, 382, ?

A) 772

B) 778

C) 800

D) 950

**Answer Key: Option A**

**Explanation:** The pattern is  $\times 2 + 2$ , then  $\times 2 + 4$ , then  $\times 2 + 6$ . Next is  $382 \times 2 + 8 = 772$ .

### Question 43

Assertion: Kriti has a box 4 times heavier than the box of Shruti. While Shruti's box is 35 kg heavier than that of Rohit.

If Rohit's box weighs 30kg, then the weight of Kriti's box = 260 kg

Reason: Shruti's box weighs = 65 kg

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) None of them are true

**Answer Key: Option C**

**Explanation:** Rohit's box = 30 kg, so Shruti's =  $30 + 35 = 65$  kg. Kriti's is  $4 \times 65 = 260$  kg. Both statements are true and the reason supports the assertion.

### Question 44

RIBBON is coded as NOBBIR

What will LAPTOP be coded as?

A) POTPAL

B) TOPPAL

C) LOPTAP

D) TAPPOL

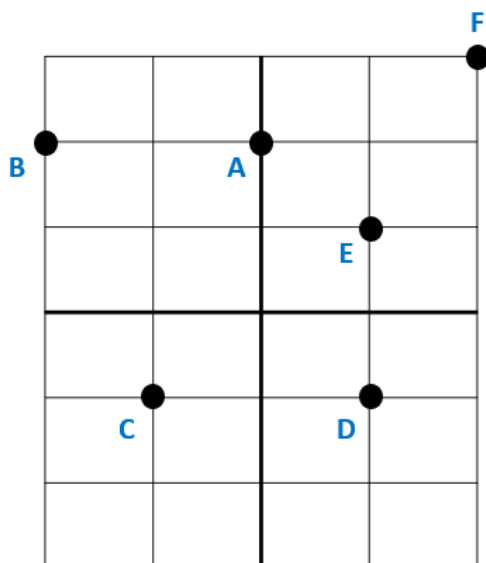
**Answer Key: Option A**

**Explanation:** RIBBON becomes NOBBIR by reversing the letters. Reversing LAPTOP gives POTPAL.

### Question 45

Assertion: Point B is to the West of A.

Reason: The point exactly on the Left of A will be towards the West of A.



A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) None of them are true

**Answer Key: Option C**

**Explanation:** On the diagram, point B lies to the left of A, and left of a point is west. So both assertion and reason are true, and the reason explains the assertion.

### Question 46

Assertion: The Simple Interest on sum of Rs. 100 for 1 year at 5% per annum will be Rs. 5.

Reason: The denominator of  $(100 \times 5 \times 1)$  is multiplied by 100

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) None of them are true

**Answer Key: Option A**

**Explanation:** SI on Rs.100 at 5% for 1 year is  $100 \times 5 \times 1 / 100 = \text{Rs.}5$ , so the assertion is true. The reason is false because the expression is divided by 100, not multiplied.

### Question 47

Assertion: The perimeter of a triangle with lengths  $4y$ ,  $7y + 2$  and  $6y - 1$  will be  $17y + 1$

Reason: The perimeter of a triangle is the sum of the three sides

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) None of them are true

**Answer Key: Option C**

**Explanation:** Perimeter =  $4y + (7y+2) + (6y-1) = 17y + 1$ . So both assertion and reason are true, and the reason explains the result.

### Question 48

Assertion: The selling price of an article is Rs.500 and the cost price is Rs. 350. Then profit happens.

Reason: If  $SP > CP$ , then loss occurs.

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) None of them are true

**Answer Key: Option A**

**Explanation:** If selling price is greater than cost price, there is profit. So the assertion is true, but the reason is false because  $SP > CP$  does not mean loss.

### Question 49

Assertion: A class has students of height (in cm)

150, 155, 150, 157, 150, 156, 157, 150, 153, 152

The most common height is 152 cm.

Reason: The data which occurs for the most number of times is the most common data and known as frequency of the experiment.

A) Only Assertion is true

B) Only Reason is true

C) Both Assertion and Reason are true and Reason is the correct explanation of the assertion

D) None of them are true

**Answer Key: Option B**

**Explanation:** The height 150 cm occurs most often, not 152 cm, so the assertion is false. The reason gives the idea that the most repeated value is found by frequency, so it is treated as true here.

### Question 50

Assertion: 504 is divisible by 6

Reason: 504 is divisible by 2 as well as 3

**A)** Only Assertion is true

**B)** Only Reason is true

**C)** Both Assertion and Reason are true and Reason is the correct explanation of the assertion

**D)** None of them are true

**Answer Key: Option C**

**Explanation:** A number divisible by both 2 and 3 is divisible by 6. Since 504 is divisible by 2 and 3, both the assertion and reason are true, and the reason explains the assertion.

**Answer Key Summary**

Teacher-friendly quick check

Q1-Q10	Q11-Q20	Q21-Q30	Q31-Q40	Q41-Q50
1. A	11. B	21. B	31. A	41. C
2. D	12. A	22. B	32. C	42. A
3. C	13. C	23. C	33. B	43. C
4. C	14. A	24. B	34. A	44. A
5. B	15. B	25. A	35. A	45. C
6. A	16. B	26. D	36. B	46. A
7. D	17. C	27. B	37. C	47. C
8. A	18. C	28. B	38. A	48. A
9. B	19. D	29. C	39. C	49. B
10. A	20. A	30. B	40. D	50. C