

SCO INTERNATIONAL OLYMPIAD

CLASS 5 SAMPLE PAPER

A comprehensive sample paper for schools, teachers, parents, and students

Designed from Class 5 maths-paper pathways and aligned with SCO's official paper flow for guided practice, concept revision, answer-supported learning.

- 50 question blocks across General Maths, Reason & Assertion, Case Study, and Achievers
- answer key and explanation built into every question block for guided practice

Maths	Reasoning	Case Study	Achievers	Answer Key
Decimals	Geometry	Profit & Interest	Data	School Use

Guidelines for the Candidate

Official SCO sample-paper layout with answer-supported question blocks

Paper format

- Total questions: 50
- One correct option for each question
- Four sections: General Maths, Reason & Assertion, Case Study, Achievers
- Each question block contains the answer key and explanation

Sample-paper editing note

- mathematical option errors from the source were corrected where needed
- problem statements were preserved as closely as possible
- this edition is intended for guided website, classroom, and home use
- cover remains editable and no full-page image is used



General Maths – 20 Questions

Question 1

What is the place value of 5 in the number 6,52,438?

- | | |
|-----------|----------|
| 1. 50,000 | 2. 5,000 |
| 3. 500 | 4. 50 |

Answer Key: Option 1

Explanation: In 6,52,438, the digit 5 is in the ten-thousands place, so its place value is $5 \times 10,000 = 50,000$.

Question 2

Subtract 17.6 from 25.89. What is the result?

- | | |
|---------|---------|
| 1. 8.49 | 2. 9.29 |
| 3. 8.29 | 4. 9.59 |

Answer Key: Option 3

Explanation: Align the decimals and subtract: $25.89 - 17.60 = 8.29$.

Question 3

Multiply 4.75 by 3.2. What is the product?

- | | |
|----------|---------|
| 1. 15.2 | 2. 14.8 |
| 3. 15.05 | 4. 16.2 |

Answer Key: Option 1

Explanation: Multiply 4.75 by 3.2 to get 15.20, which is written as 15.2.

Question 4

A rectangle has a length of 15 cm and a width of 6 cm. What is the perimeter?

- | | |
|----------|----------|
| 1. 42 cm | 2. 45 cm |
| 3. 36 cm | 4. 48 cm |

Answer Key: Option 1

Explanation: Perimeter of a rectangle = $2(l + w) = 2(15 + 6) = 42$ cm.



Question 5

What is the area of a triangle with a base of 10 cm and height of 6 cm?

- | | |
|----------------------|----------------------|
| 1. 30 cm^2 | 2. 60 cm^2 |
| 3. 36 cm^2 | 4. 50 cm^2 |

Answer Key: Option 1

Explanation: Area of a triangle = $\frac{1}{2} \times \text{base} \times \text{height} = \frac{1}{2} \times 10 \times 6 = 30 \text{ cm}^2$.

Question 6

A shopkeeper sells a toy for ₹50 and buys it for ₹40. What is the profit?

- | | |
|--------|--------|
| 1. ₹8 | 2. ₹10 |
| 3. ₹12 | 4. ₹9 |

Answer Key: Option 2

Explanation: Profit = selling price – cost price = ₹50 – ₹40 = ₹10.

Question 7

The cost price of an item is ₹200. If the profit is ₹50, what is the selling price?

- | | |
|---------|---------|
| 1. ₹250 | 2. ₹200 |
| 3. ₹150 | 4. ₹300 |

Answer Key: Option 1

Explanation: Selling price = cost price + profit = ₹200 + ₹50 = ₹250.

Question 8

The total cost of 12 pencils is ₹72. What is the cost of 5 pencils?

- | | |
|--------|--------|
| 1. ₹25 | 2. ₹30 |
| 3. ₹35 | 4. ₹40 |

Answer Key: Option 2

Explanation: If 12 pencils cost ₹72, then 1 pencil costs ₹6. So 5 pencils cost ₹30.

Question 9

The sum of two numbers is 85, and their difference is 15. What are the two numbers?

- | | |
|--------------|--------------|
| 1. 50 and 35 | 2. 55 and 30 |
| 3. 60 and 25 | 4. 45 and 40 |



Answer Key: Option 1

Explanation: The two numbers are $(85 + 15)/2 = 50$ and $(85 - 15)/2 = 35$.

Question 10

A person invests ₹1,000 at an interest rate of 5% per annum. What is the simple interest after 2 years?

- | | |
|---------|---------|
| 1. ₹100 | 2. ₹110 |
| 3. ₹90 | 4. ₹105 |

Answer Key: Option 1

Explanation: Simple interest = $PRT/100 = 1000 \times 5 \times 2 / 100 = ₹100$.

Question 11

If a number is divisible by both 4 and 6, what is the smallest number it could be?

- | | |
|-------|-------|
| 1. 12 | 2. 24 |
| 3. 18 | 4. 36 |

Answer Key: Option 1

Explanation: A number divisible by both 4 and 6 must be a common multiple. The smallest common multiple is 12.

Question 12

What is the difference between the LCM and GCF of 18 and 24?

- | | |
|-------|-------|
| 1. 66 | 2. 60 |
| 3. 72 | 4. 6 |

Answer Key: Option 1

Explanation: For 18 and 24, the LCM is 72 and the GCF is 6. Their difference is $72 - 6 = 66$.

Question 13

What is the sum of all the factors of 12?

- | | |
|-------|-------|
| 1. 28 | 2. 24 |
| 3. 18 | 4. 30 |

Answer Key: Option 1

Explanation: The factors of 12 are 1, 2, 3, 4, 6, and 12. Their sum is 28.



Question 14

What is the perimeter of a square whose side is 8 cm?

- | | |
|----------|----------|
| 1. 32 cm | 2. 36 cm |
| 3. 16 cm | 4. 24 cm |

Answer Key: Option 1

Explanation: Perimeter of a square = $4 \times \text{side} = 4 \times 8 = 32$ cm.

Question 15

If the radius of a circle is 7 cm, what is its area? (Use $\pi=22/7$)

- | | |
|-----------------------|-----------------------|
| 1. 49 cm^2 | 2. 154 cm^2 |
| 3. 100 cm^2 | 4. 77 cm^2 |

Answer Key: Option 2

Explanation: Area of a circle = $\pi r^2 = 22/7 \times 7 \times 7 = 154 \text{ cm}^2$.

Question 16

Which of the following is the simplest form of the fraction 18 / 24 ?

- | | |
|------------|------------|
| 1. $3 / 4$ | 2. $1 / 2$ |
| 3. $2 / 3$ | 4. $5 / 6$ |

Answer Key: Option 1

Explanation: Divide 18 and 24 by their GCF, 6. That gives $3/4$.

Question 17

If a person invests ₹5,000 at 8% simple interest for 3 years, what will be the total amount?

- | | |
|-----------|-----------|
| 1. ₹6,200 | 2. ₹6,000 |
| 3. ₹6,400 | 4. ₹5,800 |

Answer Key: Option 1

Explanation: Simple interest = $5000 \times 8 \times 3 / 100 = ₹1,200$, so total amount = $₹5,000 + ₹1,200 = ₹6,200$.

Question 18

A triangle has sides 6 cm, 8 cm, and 10 cm. What type of triangle is it?

- | | |
|-----------------|----------------|
| 1. Scalene | 2. Equilateral |
| 3. Right-angled | 4. Isosceles |



Answer Key: Option 3

Explanation: Since $6^2 + 8^2 = 36 + 64 = 100 = 10^2$, the triangle is right-angled.

Question 19

A person has ₹500. If he spends ₹125 each day, how many days will he be able to continue?

- | | |
|------|------|
| 1. 3 | 2. 4 |
| 3. 5 | 4. 6 |

Answer Key: Option 2

Explanation: ₹500 ÷ ₹125 = 4, so the person can continue for 4 days.

Question 20

If a book is priced at ₹120 and is sold at a 10% discount, what is the selling price?

- | | |
|---------|---------|
| 1. ₹110 | 2. ₹112 |
| 3. ₹108 | 4. ₹100 |

Answer Key: Option 3

Explanation: 10% of ₹120 is ₹12. So the discounted price is ₹120 – ₹12 = ₹108.

Reason & Assertion – 10 Questions

Question 21

Assertion: The sum of the interior angles of a hexagon is 720° . **Reason:** The sum of the interior angles of a polygon is given by the formula $(n - 2) \times 180^\circ$, where n is the number of sides.

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
| 3. The Assertion is correct, but the Reason is incorrect. | 4. The Assertion is incorrect, but the Reason is correct. |

Answer Key: Option 1

Explanation: For a hexagon, $n = 6$. So $(n - 2) \times 180 = 4 \times 180 = 720^\circ$. The reason correctly explains the assertion.

Question 22

Assertion: The area of a square is equal to the square of its side length. **Reason:** The formula for the area of a square is $A = \text{side}^2$

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
|---|---|



3. The Assertion is correct, but the Reason is incorrect.

4. The Assertion is incorrect, but the Reason is correct.

Answer Key: Option 1

Explanation: The area of a square is side \times side, written as side^2 . So the reason directly explains the assertion.

Question 23

Assertion: If two numbers have the same LCM and GCF, then the numbers must be equal. **Reason:** The relationship between two numbers a and b can be written as $\text{LCM}(a,b) \times \text{GCF}(a,b) = a \times b$.

1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion.

2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion.

3. The Assertion is correct, but the Reason is incorrect.

4. The Assertion is incorrect, but the Reason is correct.

Answer Key: Option 2

Explanation: The assertion is true: if the LCM and GCF are the same, the two numbers must be equal. The given relation is true, but by itself it does not fully explain why the numbers must be equal.

Question 24

Assertion: The probability of rolling a number greater than 4 on a six-sided die is $1/3$. **Reason:** The possible outcomes on a six-sided die are 1, 2, 3, 4, 5, and 6, and the number of outcomes greater than 4 is 2 (5 and 6).

1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion.

2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion.

3. The Assertion is correct, but the Reason is incorrect.

4. The Assertion is incorrect, but the Reason is correct.

Answer Key: Option 1

Explanation: Numbers greater than 4 on a die are 5 and 6, so there are 2 favorable outcomes out of 6. Probability = $2/6 = 1/3$.

Question 25

Assertion: The sum of the first 100 natural numbers is 5050. **Reason:** The sum of the first n natural numbers is given by the formula $n(n+1)/2$.

1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion.

2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion.

3. The Assertion is correct, but the Reason is incorrect.

4. The Assertion is incorrect, but the Reason is correct.

Answer Key: Option 1

Explanation: Using $n(n+1)/2$ with $n = 100$ gives $100 \times 101 / 2 = 5050$. So both statements are correct and the reason explains the assertion.

Question 26

Assertion: The expression $(x^2 - 9)$ can be factorized as $(x - 3)(x + 3)$ **Reason:** The difference of squares can be factorized as $a^2 - b^2 = (a - b)(a + b)$.

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
| 3. The Assertion is correct, but the Reason is incorrect. | 4. The Assertion is incorrect, but the Reason is correct. |

Answer Key: Option 1

Explanation: $x^2 - 9$ is a difference of squares: $x^2 - 3^2 = (x - 3)(x + 3)$. The reason correctly explains the factorization.

Question 27

Assertion: The sum of the angles in a quadrilateral is 360° . **Reason:** A quadrilateral can be divided into two triangles, and the sum of the angles in a triangle is 180° .

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
| 3. The Assertion is correct, but the Reason is incorrect. | 4. The Assertion is incorrect, but the Reason is correct. |

Answer Key: Option 1

Explanation: A quadrilateral can be split into 2 triangles. Since each triangle has angle sum 180° , the total is 360° .

Question 28

A number is divisible by 11 if the difference between the sum of the digits in odd positions and the sum of the digits in even positions is divisible by 11. Reason: This divisibility rule is a special property for numbers divisible by 11.

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
| 3. The Assertion is correct, but the Reason is incorrect. | 4. The Assertion is incorrect, but the Reason is correct. |

Answer Key: Option 2

Explanation: The divisibility rule for 11 is correct, and the reason is also true. But the reason only states that it is a special rule; it does not explain how the rule works.

Question 29

Assertion: The area of a circle is directly proportional to the square of its radius. **Reason:** The formula for the area of a circle is $A = \pi r^2$, where r is the radius.

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
| 3. The Assertion is correct, but the Reason is incorrect. | 4. The Assertion is incorrect, but the Reason is correct. |

Answer Key: Option 1



Explanation: Because $A = \pi r^2$, the area changes with the square of the radius. So the reason correctly explains the assertion.

Question 30

Assertion: A cube with a side length of 5 cm has a volume of 125 cubic centimeters. **Reason:** The volume of a cube is calculated by $V = \text{side}^3$.

- | | |
|---|---|
| 1. Both Assertion and Reason are correct, and the Reason is the correct explanation of the Assertion. | 2. Both Assertion and Reason are correct, but the Reason is not the correct explanation of the Assertion. |
| 3. The Assertion is correct, but the Reason is incorrect. | 4. The Assertion is incorrect, but the Reason is correct. |

Answer Key: Option 1

Explanation: Volume of a cube = $\text{side}^3 = 5^3 = 125 \text{ cm}^3$, so both statements are correct and the reason explains the assertion.

Case Study / Maths in Everyday Life – 10 Questions

Question 31

Riya went shopping and bought an item that costs ₹800. The shopkeeper gave her a 20% discount on the item. After the discount, Riya decided to buy another item that costs ₹300. How much did Riya pay in total after both purchases, including the discount?

- | | |
|---------|-----------|
| 1. ₹900 | 2. ₹940 |
| 3. ₹960 | 4. ₹1,000 |

Answer Key: Option 2

Explanation: 20% of ₹800 is ₹160, so the discounted price is ₹640. Then ₹640 + ₹300 = ₹940.

Question 32

A car travels at a speed of 60 km/h. How long will it take to travel a distance of 240 km?

- | | |
|------------|------------|
| 1. 4 hours | 2. 5 hours |
| 3. 6 hours | 4. 7 hours |

Answer Key: Option 1

Explanation: Time = distance ÷ speed = $240 \div 60 = 4$ hours.



Question 33

A factory produces 500 toys in 5 days. If the factory continues at the same rate, how many toys will it produce in 12 days?

- | | |
|---------------|---------------|
| 1. 1,200 toys | 2. 1,000 toys |
| 3. 1,500 toys | 4. 2,400 toys |

Answer Key: Option 1

Explanation: The factory makes $500 \div 5 = 100$ toys per day. In 12 days it will make $100 \times 12 = 1,200$ toys.

Question 34

A rectangular park has a length of 50 meters and a width of 30 meters. A contractor needs to fence the park. How much fencing material will be needed to fence the entire park?

- | | |
|---------------|---------------|
| 1. 80 meters | 2. 160 meters |
| 3. 100 meters | 4. 120 meters |

Answer Key: Option 2

Explanation: Fencing needed = perimeter of the park = $2(50 + 30) = 160$ meters.

Question 35

A shopkeeper buys an item for ₹500 and sells it for ₹600. What is the percentage profit made by the shopkeeper?

- | | |
|--------|--------|
| 1. 20% | 2. 25% |
| 3. 10% | 4. 30% |

Answer Key: Option 1

Explanation: Profit = ₹600 - ₹500 = ₹100. Profit% = $100/500 \times 100 = 20\%$.

Question 36

A recipe calls for $2\frac{1}{2}$ cups of flour for 4 servings. If you want to make 10 servings, how much flour is needed?

- | | |
|------------------------|-----------|
| 1. $6\frac{1}{4}$ cups | 2. 6 cups |
| 3. $7\frac{1}{2}$ cups | 4. 5 cups |

Answer Key: Option 1

Explanation: $2\frac{1}{2}$ cups for 4 servings means $2.5/4$ cups per serving. For 10 servings, flour needed = $2.5 \times 10/4 = 6.25$ cups = $6\frac{1}{4}$ cups.



Question 37

Case Study: Data Handling In a survey of 100 students, the number of students who prefer sports is 40, the number who prefer arts is 30, and the remaining students prefer music. What percentage of the students prefer music?

- | | |
|--------|--------|
| 1. 30% | 2. 40% |
| 3. 20% | 4. 50% |

Answer Key: Option 1

Explanation: 40 students prefer sports and 30 prefer arts, so 70 are counted. The remaining 30 out of 100 prefer music, which is 30%.

Question 38

A person walks 2 km to his school in 25 minutes and returns home in 20 minutes. What is the average speed of the person for the entire trip?

- | | |
|-------------|------------------------|
| 1. 4 km/h | 2. $5\frac{1}{3}$ km/h |
| 3. 3.2 km/h | 4. 4.5 km/h |

Answer Key: Option 2

Explanation: Total distance = 2 + 2 = 4 km. Total time = 25 + 20 = 45 minutes = $\frac{3}{4}$ hour. Average speed = $4 \div \frac{3}{4} = \frac{16}{3} = 5\frac{1}{3}$ km/h.

Question 39

A sum of ₹2,000 is invested at an interest rate of 5% per annum for 3 years. What will be the simple interest earned?

- | | |
|---------|---------|
| 1. ₹300 | 2. ₹350 |
| 3. ₹500 | 4. ₹600 |

Answer Key: Option 1

Explanation: Simple interest = $2000 \times 5 \times 3 / 100 = ₹300$.

Question 40

A class has 40 students. $\frac{3}{8}$ of the students are absent. How many students are present in the class?

- | | |
|-------|-------|
| 1. 20 | 2. 25 |
| 3. 30 | 4. 35 |

Answer Key: Option 2

Explanation: $\frac{3}{8}$ of 40 = 15 students are absent. So present students = 40 - 15 = 25.



Achievers Section – 10 Questions

Question 41

The number 23456 is divisible by 6. Which of the following must be true about the digits of this number?

- | | |
|--|---|
| 1. The sum of the digits is divisible by 3 and the last digit is even. | 2. The sum of the digits is divisible by 2 and the last digit is odd. |
| 3. The sum of the digits is divisible by 5 and the last digit is even. | 4. The sum of the digits is divisible by 5 and the last digit is odd. |

Answer Key: Option 1

Explanation: A number divisible by 6 must be divisible by both 2 and 3. That means its last digit is even and its digit sum is divisible by 3.

Question 42

A clock shows the time as VIII:IV. What is the time in regular format (24-hour format)?

- | | |
|----------|----------|
| 1. 08:04 | 2. 08:15 |
| 3. 08:40 | 4. 10:04 |

Answer Key: Option 1

Explanation: VIII means 8 and IV means 4, so the time is 08:04 in regular format.

Question 43

A shopkeeper bought an item for ₹1,200 and sold it at a 15% profit. He then gave a 10% discount on the selling price. How much profit did the shopkeeper make?

- | | |
|---------|---------|
| 1. ₹42 | 2. ₹180 |
| 3. ₹162 | 4. ₹200 |

Answer Key: Option 1

Explanation: A 15% profit on ₹1,200 gives a marked selling price of ₹1,380. A 10% discount on ₹1,380 is ₹138, so final price is ₹1,242 and profit is ₹42.

Question 44

A rectangular garden has a length of 15 m and a width of 10 m. The garden is surrounded by a pathway of width 2 m on all sides. What is the total area of the garden and pathway together?

- | | |
|-----------------------|-----------------------|
| 1. 250 m ² | 2. 266 m ² |
| 3. 280 m ² | 4. 300 m ² |



Answer Key: Option 2

Explanation: The pathway adds 2 m on each side, so the outer rectangle is $(15 + 4)$ m by $(10 + 4)$ m = 19 m by 14 m.
Total area = $19 \times 14 = 266 \text{ m}^2$.

Question 45

If you subtract 47.98 from 123.56 and then add 15.34 to the result, what is the final answer?

- | | |
|----------|----------|
| 1. 90.12 | 2. 90.92 |
| 3. 91.22 | 4. 92.12 |

Answer Key: Option 2

Explanation: First subtract: $123.56 - 47.98 = 75.58$. Then add 15.34: $75.58 + 15.34 = 90.92$.

Question 46

What comes next in the sequence: 1, 4, 9, 16, 25, __?

- | | |
|-------|-------|
| 1. 30 | 2. 35 |
| 3. 36 | 4. 40 |

Answer Key: Option 3

Explanation: The sequence is made of square numbers: $1^2, 2^2, 3^2, 4^2, 5^2$. The next is $6^2 = 36$.

Question 47

The following bar graph shows the number of books sold in a bookstore in a week. On Monday, 60 books were sold, on Tuesday 80, on Wednesday 100, on Thursday 120, and on Friday 60. What is the average number of books sold per day?

- | | |
|-------|-------|
| 1. 80 | 2. 84 |
| 3. 85 | 4. 90 |

Answer Key: Option 2

Explanation: Average books sold = $(60 + 80 + 100 + 120 + 60) \div 5 = 420 \div 5 = 84$.

Question 48

Divide 2.4 by 0.08. What is the result?

- | | |
|-------|-------|
| 1. 30 | 2. 40 |
| 3. 50 | 4. 60 |

Answer Key: Option 1

Explanation: $2.4 \div 0.08 = 30$ because $0.08 \times 30 = 2.4$.



Question 49

A triangular prism has a triangular base with a base of 6 cm and height 8 cm. The length of the prism is 10 cm. What is the volume of the triangular prism?

- | | |
|-----------------------|-----------------------|
| 1. 240 cm^3 | 2. 180 cm^3 |
| 3. 200 cm^3 | 4. 160 cm^3 |

Answer Key: Option 1

Explanation: Area of the triangular base = $\frac{1}{2} \times 6 \times 8 = 24 \text{ cm}^2$. Volume = $24 \times 10 = 240 \text{ cm}^3$.

Question 50

A sum of ₹5,000 is invested for 3 years at an annual simple interest rate of 6%. What is the total amount after 3 years?

- | | |
|-----------|-----------|
| 1. ₹5,500 | 2. ₹5,600 |
| 3. ₹5,800 | 4. ₹5,900 |

Answer Key: Option 4

Explanation: Simple interest = $5000 \times 6 \times 3 / 100 = ₹900$. So the total amount is $₹5,000 + ₹900 = ₹5,900$.