

Satish Science Academy

International Mathematics Olympiad (IMO) – Grade 6

Sample Paper 2 | Total Questions: 50 | Duration: 60 minutes | Maximum Marks: 60

Instructions: Each question has four options. Choose the correct answer. Sections and marking as per SOF IMO pattern for Class 6.

SECTION 1: Logical Reasoning (15 questions × 1 mark)

Q1. Find the next term in the series: 7, 14, 28, 56, ?

- A. 112
- B. 113
- C. 111
- D. 42

Q2. Find the next term in the series: 5, 10, 20, 40, ?

- A. 81
- B. 80
- C. 30
- D. 79

Q3. Choose the odd one out: 24, 36, 48, 35

- A. 24
- B. 48
- C. 35
- D. 36

Q4. What is the smaller angle between the hour and minute hands at 3:30?

- A. 75
- B. 90
- C. 60
- D. 105

Q5. Choose the odd one out: 13, 17, 19, 21

- A. 21
- B. 13
- C. 19
- D. 17

Q6. Choose the odd one out: 81, 64, 125, 49

- A. 49
- B. 125
- C. 81
- D. 64

Q7. In a code language, each letter is shifted by 3. What is the code for 'OLYMPIAD'?

- A. GDLSPBOR
- B. ROBPSLDG
- C. ROBPSLDG!
- D. ROBPSLDX

Q8. Choose the odd one out: 2, 4, 8, 10

- A. 4
- B. 10
- C. 2
- D. 8

Q9. What is the smaller angle between the hour and minute hands at 6:00?

- A. 165

- B. 180
- C. 150
- D. 0

Q10. Find the next term in the series: 1, 4, 9, 16, ?

- A. 12
- B. 26
- C. 25
- D. 24

Q11. Choose the odd one out: 9, 27, 81, 45

- A. 81
- B. 27
- C. 45
- D. 9

Q12. In a code language, each letter is shifted by 2. What is the code for 'RATIO'?

- A. TCVKQ
- B. TCVKX
- C. TCVKQ#
- D. QKVCT

Q13. In a code language, each letter is shifted by 2. What is the code for 'NUMBER'?

- A. PWODGT
- B. TGDOWP
- C. PWODGT#
- D. PWODGX

Q14. What is the smaller angle between the hour and minute hands at 3:00?

- A. 90
- B. 75
- C. 85
- D. 105

Q15. Find the next term in the series: 2, 3, 4, 5, ?

- A. 10
- B. 8
- C. 4
- D. 9

SECTION 2: Mathematical Reasoning (20 questions × 1 mark)

Q16. Find LCM of 16 and 24.

- A. 24
- B. 56
- C. 48
- D. 40

Q17. Find LCM of 12 and 18.

- A. 30
- B. 18
- C. 42
- D. 36

Q18. Solve for x: $3x + 5 = 50$

- A. 15
- B. 14
- C. 16
- D. 17

Q19. Solve for x: $3x + 5 = 26$

- A. 8
- B. 6
- C. 9
- D. 7

Q20. Find area of a rectangle with length 15 cm and breadth 4 cm.

- A. 55
- B. 60
- C. 65
- D. 38

Q21. Find LCM of 18 and 24.

- A. 36
- B. 72
- C. 78
- D. 66

Q22. A circle has radius 7 cm. Find its diameter.

- A. 14
- B. 21
- C. 15
- D. 7

Q23. The perimeter of a square is 48 cm. Find the side.

- A. 16
- B. 12
- C. 10
- D. 14

Q24. Solve for x: $3x + 9 = 63$

- A. 18
- B. 20
- C. 17
- D. 19

Q25. $\frac{7}{10}$ of 64 = ?

- A. 3.76
- B. 40.8
- C. 48.8
- D. 44.8

Q26. Find LCM of 21 and 28.

- A. 91
- B. 84
- C. 42
- D. 77

Q27. 40% of 150 = ?

- A. 67.5
- B. 60
- C. 55
- D. 65

Q28. 15% of 200 = ?

- A. 30
- B. 35
- C. 40
- D. 25

Q29. Simplify: $(18 \times 3) \div 2$

- A. 25

- B. 10.5
- C. 29
- D. 27

Q30. Divide ₹25 in the ratio 2:3. What is the first share?

- A. 20
- B. 0
- C. 10
- D. 5

Q31. Simplify: $(45 \times 5) \div 9$

- A. 25
- B. 23
- C. 27
- D. 5.56

Q32. Solve for x: $2x + 5 = 23$

- A. 11
- B. 10
- C. 9
- D. 8

Q33. Find HCF (GCD) of 16 and 24.

- A. 8
- B. 10
- C. 9
- D. 7

Q34. 25% of 360 = ?

- A. 95
- B. 108
- C. 85
- D. 90

Q35. Find HCF (GCD) of 12 and 18.

- A. 6
- B. 8
- C. 5
- D. 7

SECTION 3: Everyday Mathematics (10 questions × 1 mark)

Q36. The monthly salary is ₹12000. The annual salary is ?

- A. 132000
- B. 120000
- C. 72000
- D. 144000

Q37. A train travels 200 km at 50 km/h. Time taken (in hours) is ?

- A. 5
- B. 4.5
- C. 4
- D. 3

Q38. Convert 2.5 m to cm.

- A. 250
- B. 125
- C. 2500
- D. 25

Q39. A packet costs ₹25. How many packets can be bought with ₹200?

- A. 9
- B. 8
- C. 7
- D. 13

Q40. A car covers 180 km in 4 hours. Speed (km/h) = ?

- A. 50
- B. 55
- C. 45
- D. 35

Q41. A train travels 180 km at 45 km/h. Time taken (in hours) is ?

- A. 4.5
- B. 3
- C. 4
- D. 5

Q42. A car covers 150 km in 3 hours. Speed (km/h) = ?

- A. 55
- B. 60
- C. 50
- D. 40

Q43. A box has 4 red, 3 blue and 3 green balls. Probability of picking a red ball is ?

- A. $\frac{4}{11}$
- B. $\frac{5}{10}$
- C. $\frac{4}{10}$
- D. $\frac{3}{10}$

Q44. A student scored 75 out of 100. Percentage = ?

- A. 80
- B. 75
- C. 70
- D. 60

Q45. A packet costs ₹15. How many packets can be bought with ₹120?

- A. 7
- B. 13
- C. 9
- D. 8

SECTION 4: Achievers Section (5 questions × 3 marks)

Q46. The sum of two numbers is 45 and their difference is 9. The larger number is ?

- A. 27
- B. 26
- C. 28
- D. 18

Q47. The product of two consecutive integers is 132. The integers are ?

- A. 11 and 12
- B. 9 and 10
- C. 10 and 11
- D. 12 and 13

Q48. A person spends $\frac{1}{3}$ of salary on rent and $\frac{1}{4}$ on food. If salary is ₹12000, savings = ?

- A. 6000
- B. 4500
- C. 5000
- D. 4000

Q49. A tap fills a tank in 6 h and another empties it in 8 h. If both are opened, time to fill (h) = ?

- A. 22
- B. 24
- C. 25
- D. 26

Q50. A rectangle has perimeter 80 cm and length 24 cm. Breadth (cm) = ?

- A. 14
- B. 18
- C. 16
- D. 24

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