

Satish Science Academy

International Mathematics Olympiad (IMO) – Grade 6

Sample Paper 3 | 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. What is the smaller angle between the hour and minute hands at 6:00?

- A. 165
- B. 180
- C. 0
- D. 150

Q2. In a code language, each letter is shifted by 2. What is the code for 'MATH'?

- A. OCVJ
- B. JVCO
- C. OCVX
- D. OCVJ!

Q3. Find the next term in the series: 2, 3, 4, 5, ?

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

Q4. Choose the odd one out: 81, 64, 125, 49

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

Q5. In a code language, each letter is shifted by 2. What is the code for 'RATIO'?

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

Q6. Find the next term in the series: 7, 14, 28, 56, ?

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

Q7. Choose the odd one out: 2, 4, 8, 10

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

Q8. In a code language, each letter is shifted by 1. What is the code for 'NUMBER'?

- A. OVNCFX
- B. OVNCFS
- C. OVNCFS*
- D. SFCNVO

Q9. Find the next term in the series: 3, 6, 12, 24, ?

- A. 47

- B. 48
- C. 49
- D. 18

Q10. In a code language, each letter is shifted by 2. What is the code for 'OLYMPIAD'?

- A. QNAORKCX
- B. FCKROANQ
- C. QNAORKCF
- D. QNAORKCF!

Q11. What is the smaller angle between the hour and minute hands at 3:00?

- A. 105
- B. 90
- C. 95
- D. 75

Q12. Choose the odd one out: 9, 27, 81, 45

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

Q13. What is the smaller angle between the hour and minute hands at 3:30?

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

Q14. Find the next term in the series: 1, 4, 9, 16, ?

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

Q15. In a code language, each letter is shifted by 2. What is the code for 'ANGLE'?

- A. CPING
- B. GNIPC
- C. CPINX
- D. CPING!

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

Q16. Solve for x: $2x + 3 = 39$

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

Q17. Find LCM of 21 and 28.

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

Q18. A circle has radius 7 cm. Find its diameter.

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

Q19. The perimeter of a square is 32 cm. Find the side.

- A. 10
- B. 12
- C. 8
- D. 6

Q20. Find HCF (GCD) of 12 and 18.

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

Q21. Divide 99 in the ratio 4:7. What is the first share?

- A. 46
- B. 9
- C. 26
- D. 36

Q22. 15% of 200 = ?

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

Q23. Find LCM of 15 and 20.

- A. 55
- B. 65
- C. 30
- D. 60

Q24. Divide 72 in the ratio 3:5. What is the first share?

- A. 9
- B. 37
- C. 17
- D. 27

Q25. Find area of a rectangle with length 12 cm and breadth 5 cm.

- A. 65
- B. 34
- C. 55
- D. 60

Q26. The average of 6, 8, 10, 12, 14 is ?

- A. 9
- B. 15
- C. 10
- D. 11

Q27. Find HCF (GCD) of 16 and 24.

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

Q28. Find area of a rectangle with length 10 cm and breadth 6 cm.

- A. 32
- B. 65
- C. 55
- D. 60

Q29. 40% of 150 = ?

- A. 65

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

Q30. Simplify: $(18 \times 3) \div 2$

- A. 29
- B. 25
- C. 10.5
- D. 27

Q31. Simplify: $(36 \times 6) \div 3$

- A. 70
- B. 72
- C. 74
- D. 14

Q32. A circle has radius 5 cm. Find its diameter.

- A. 5
- B. 10
- C. 15
- D. 11

Q33. $7/10$ of 64 = ?

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

Q34. Solve for x: $3x + 7 = 52$

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

Q35. 25% of 360 = ?

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

SECTION 3: Everyday Mathematics (10 questions \times 1 mark)

Q36. A train travels 180 km at 45 km/h. Time taken (in hours) is ?

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

Q37. A box has 4 red, 3 blue and 3 green balls. Probability of picking a red ball is ?

- A. $4/11$
- B. $4/10$
- C. $3/10$
- D. $5/10$

Q38. Convert 3.2 m to cm.

- A. 3200
- B. 32
- C. 160
- D. 320

Q39. A train travels 240 km at 60 km/h. Time taken (in hours) is ?

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

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

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

Q41. A packet costs ₹15. How many packets can be bought with ₹120?

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

Q42. A packet costs ₹25. How many packets can be bought with ₹200?

- A. 7
- B. 8
- C. 9
- D. 3

Q43. The monthly salary is ₹18000. The annual salary is ?

- A. 180000
- B. 108000
- C. 216000
- D. 198000

Q44. Convert 2.5 m to cm.

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

Q45. A box has 5 red, 4 blue and 1 green balls. Probability of picking a green ball is ?

- A. $\frac{1}{10}$
- B. $\frac{1}{11}$
- C. $\frac{0}{10}$
- D. $\frac{2}{10}$

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

Q46. The product of two consecutive integers is 272. The integers are ?

- A. 14 and 15
- B. 15 and 16
- C. 16 and 17
- D. 17 and 18

Q47. A person spends $\frac{1}{3}$ of salary on rent and $\frac{1}{4}$ on food. If salary is ₹18000, savings = ?

- A. 6500
- B. 7000
- C. 8500
- D. 7500

Q48. The sum of two numbers is 45 and their difference is 9. The larger number is ?

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

Q49. A person spends $\frac{1}{3}$ of salary on rent and $\frac{1}{4}$ on food. If salary is ₹12000, savings = ?

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

Q50. The sum of two numbers is 60 and their difference is 12. The larger number is ?

- A. 24
- B. 36
- C. 35
- D. 37

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