

Satish Science Academy

International Mathematics Olympiad (IMO) – Grade 6

Sample Paper 5 | 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. Choose the odd one out: 2, 4, 8, 10

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

Q2. In a code language, each letter is shifted by 1. What is the code for 'NUMBER'?

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

Q3. In a code language, each letter is shifted by 1. What is the code for 'MATH'?

- A. NBUI*
- B. NBUX
- C. NBUI
- D. IUBN

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

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

Q5. Choose the odd one out: 24, 36, 48, 35

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

Q6. What is the smaller angle between the hour and minute hands at 6:00?

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

Q7. In a code language, each letter is shifted by 2. What is the code for 'ANGLE'?

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

Q8. Find the next term in the series: 7, 14, 28, 56, ?

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

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

- A. 18

- B. 48
- C. 49
- D. 47

Q10. Choose the odd one out: 9, 27, 81, 45

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

Q11. Choose the odd one out: 81, 64, 125, 49

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

Q12. Find the next term in the series: 1, 4, 9, 16, ?

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

Q13. Find the next term in the series: 5, 10, 20, 40, ?

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

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

- A. 87
- B. 105
- C. 75
- D. 90

Q15. In a code language, each letter is shifted by 1. What is the code for 'RATIO'?

- A. PJUBS
- B. SBUJX
- C. SBUJP
- D. SBUJP#

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

Q16. Simplify: $(18 \times 3) \div 2$

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

Q17. Find area of a rectangle with length 15 cm and breadth 4 cm.

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

Q18. $7/10$ of $64 = ?$

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

Q19. Find HCF (GCD) of 16 and 24.

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

Q20. Divide 45 in the ratio 2:3. What is the first share?

- A. 28
- B. 18
- C. 9
- D. 8

Q21. Solve for x: $3x + 5 = 32$

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

Q22. Simplify: $(45 \times 5) \div 9$

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

Q23. The perimeter of a square is 64 cm. Find the side.

- A. 18
- B. 20
- C. 16
- D. 14

Q24. The perimeter of a square is 48 cm. Find the side.

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

Q25. Find HCF (GCD) of 21 and 28.

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

Q26. Solve for x: $2x + 7 = 43$

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

Q27. Find HCF (GCD) of 12 and 18.

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

Q28. $\frac{3}{4}$ of 64 = ?

- A. 44
- B. 48
- C. 9.14
- D. 52

Q29. Find area of a rectangle with length 12 cm and breadth 5 cm.

- A. 34

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

Q30. 25% of 360 = ?

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

Q31. Solve for x: $4x + 3 = 51$

- A. 12
- B. 14
- C. 13
- D. 11

Q32. Find LCM of 16 and 24.

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

Q33. A circle has radius 5 cm. Find its diameter.

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

Q34. Find LCM of 12 and 18.

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

Q35. A circle has radius 9 cm. Find its diameter.

- A. 9
- B. 27
- C. 19
- D. 18

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

Q36. The monthly salary is ■25000. The annual salary is ?

- A. 300000
- B. 250000
- C. 150000
- D. 275000

Q37. The monthly salary is ■18000. The annual salary is ?

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

Q38. Convert 3.2 m to cm.

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

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

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

Q40. A student scored 75 out of 100. Percentage = ?

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

Q41. A train travels 200 km at 50 km/h. Time taken (in hours) is ?

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

Q42. A car covers 180 km in 4 hours. Speed (km/h) = ?

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

Q43. A box has 3 red, 5 blue and 2 green balls. Probability of picking a blue ball is ?

- A. $\frac{5}{11}$
- B. $\frac{4}{10}$
- C. $\frac{6}{10}$
- D. $\frac{5}{10}$

Q44. A train travels 180 km at 45 km/h. Time taken (in hours) is ?

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

Q45. Convert 2.5 m to cm.

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

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

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

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

Q47. A rectangle has perimeter 72 cm and length 20 cm. Breadth (cm) = ?

- A. 18
- B. 20
- C. 16
- D. 14

Q48. The product of two consecutive integers is 132. The integers are ?

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

Q49. A tap fills a tank in 5 h and another empties it in 10 h. If both are opened, time to fill (h) = ?

- A. 8
- B. 12
- C. 10
- D. 11

Q50. 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. 25
- C. 26
- D. 24

Satish Science Academy