

Patterns in Mathematics

Mental Maths Challenge — 25 Quick Questions (Fill in the Blanks | MCQ | True-False | Solve Mentally)

Name:	Class:	Section:
Date:	Roll No.:	Marks: ____ / 20

Instructions: This is a mental mathematics test. Try to solve each question in your head, without using pen, paper, or a calculator for working — write only the final answer. You have 20 minutes to complete all 25 questions.

- The next term after 1, 4, 9, 16 is _____.
- 1, 3, 6, 10 are called _____ numbers.
(a) Square (b) Triangular (c) Cube (d) Even
- 1, 2, 4, 8, 16 is the Powers of 2 sequence.
- Find the sum of the first 4 odd numbers mentally (1+3+5+7).
- A shape with 5 equal sides is called a _____.
- The 5th cube number is:
(a) 100 (b) 125 (c) 81 (d) 64
- 36 is a triangular number.
- What is the 6th even number?
- 1, 8, 27, 64 is the sequence of _____.
- Which sequence is 1, 1, 2, 3, 5, 8?
(a) Squares (b) Virahānka numbers (c) Cubes (d) Triangular numbers
- A regular hexagon has 6 equal sides.
- Double the 5th power of 2 mentally (2×16).
- The sum of the first n odd numbers is always a _____ number.

14. K4 (Complete Graph, 4 points) has how many lines?
(a) 4 (b) 5 (c) 6 (d) 3
15. Geometry studies patterns in numbers.
16. What is the 4th triangular number?
17. 1, 7, 19, 37 is the sequence of _____ numbers.
18. The next number after 1, 3, 9, 27 is:
(a) 30 (b) 54 (c) 81 (d) 108
19. Number theory studies patterns in whole numbers.
20. Find $6 \times (\text{3rd triangular number}) + 1$ mentally.
21. A polygon with 7 equal sides is called a _____.
22. $1 + 2 + 3 + 2 + 1$ equals:
(a) 7 (b) 8 (c) 9 (d) 6
23. The 3rd square number is 6.
24. What is the next term after 1, 2, 4, 8, 16 mentally?
25. Find the sum of the first 3 triangular numbers $(1+3+6)$ mentally.

Answer Key — Mental Maths Challenge

1. 25
2. (b) Triangular
3. True
4. 16
5. pentagon
6. (b) 125
7. True
8. 12
9. cubes
10. (b) Virahānka numbers
11. True
12. 32
13. square
14. (c) 6
15. False
16. 10
17. hexagonal
18. (c) 81
19. True
20. 37 ($6 \times 6 + 1 = 37$)
21. heptagon
22. (c) 9
23. False (it is 9)
24. 32
25. 10