

MCQs on Chapter 8: Predicting What Comes Next - Exploring Sequences and Progressions for Class 9 Maths

1. What is the next term in the sequence 1, 3, 6, 10, 15, ...?
 - a) 18
 - b) 19
 - c) 21
 - d) 25
2. Which of the following is a sequence of square numbers?
 - a) 1, 3, 5, 7, ...
 - b) 1, 2, 3, 4, ...
 - c) 2, 4, 6, 8, ...
 - d) 1, 4, 9, 16, ...
3. If $u_n = 2n - 1$, what is the value of u_{10} ?
 - a) 18
 - b) 19
 - c) 20
 - d) 21
4. Which term of the odd number sequence is 137?
 - a) 67th
 - b) 68th
 - c) 69th
 - d) 70th
5. The recursive rule for the sequence 1, 4, 7, 10, 13, ... is:
 - a) $t_n = t_{n-1} + 3$
 - b) $t_n = t_{n-1} + 4$
 - c) $t_n = 3t_{n-1}$
 - d) $t_n = t_{n-1} + 2$
6. What is the next term in the Virahānka–Fibonacci sequence 1, 2, 3, 5, 8, 13, ...?
 - a) 18
 - b) 20

- c) 21
d) 24
7. The common difference of the AP 3, 8, 13, 18, ... is:
a) 3
b) 4
c) 5
d) 8
8. Which of the following is an Arithmetic Progression?
a) 2, 4, 8, 16, ...
b) 5, 10, 15, 20, ...
c) 1, 4, 9, 16, ...
d) 1, 3, 6, 10, ...
9. The n th term of an AP is given by:
a) $a + r^{n-1}$
b) $a + nd$
c) $a + (n - 1)d$
d) ad^{n-1}
10. What is the sum of the first 20 natural numbers?
a) 190
b) 200
c) 210
d) 220
11. The 10th triangular number is:
a) 45
b) 50
c) 55
d) 60
12. The sequence 3, 6, 12, 24, 48, ... is a:
a) Finite sequence
b) AP
c) GP
d) Triangular sequence

13. What is the common ratio of the GP 1, 3, 9, 27, 81, ...?
- a) 1
 - b) 2
 - c) 4
 - d) 3
14. Which of the following is the n th term of a GP with first term a and common ratio r ?
- a) $a + (n - 1)r$
 - b) ar^n
 - c) ar^{n-1}
 - d) $a + r^n$
15. In the Sierpiński triangle, the number of black triangles at Stage 4 is:
- a) 27
 - b) 81
 - c) 64
 - d) 243

Answer Key:

1 - c, 2 - d, 3 - b, 4 - c, 5 - a, 6 - c, 7 - c, 8 - b, 9 - c, 10 - c, 11 - c, 12 - c, 13 - d, 14 - c, 15 - b

