

SEQUENCES AND SERIES

INTRODUCTION OF SEQUENCES AND SERIES

EXERCISE

Q.1 $\sum_{i=1}^4 2n + 3 = ?$

- (a) 5 (b) 12 (c) 21 (d) 32

Q.2 Is the sum of 1, 2, 3, and 4, which equals 10, considered a series?

- (a) 1+2+3+4 only (b) 10 only
(c) 1+2+3+4 and 10 (d) neither 1+ 2+ 3+ 4 nor 10

Q.3 The sequence 1, 1, 2, 3, 5 is part of the Fibonacci sequence.

- (a) TRUE (b) False
(c) Can't be determine (d) None of these

Q.4 Which of the following relations produces the Fibonacci sequence?

- (a) $a_n = a_{n-1} + a_{n-2}$ (b) $a_{n-1} = a_n + a_{n-2}$
(c) $a_{n-2} = a_n + a_{n-1}$ (d) $a_n = a_{n+1} + a_{n-2}$

Q.5 Which of the following sequences is finite?

- (a) 48,24,12, (b) 1,2,3,
(c) 2,4,6,8,10 (d) 2,3,5,7,11,13,

Q.6 The values of $7\log\left(\frac{16}{15}\right) + 5\log\left(\frac{25}{24}\right) + 3\log\left(\frac{81}{80}\right)$ is.

- (a) $\log 2$ (b) $\log 3$ (c) 1 (d) 0

Q.7 The value of $\frac{\log_a(\log_b x)}{\log_b(\log_a b)}$ is

- (a) $\log_b a$ (b) $\log_a b$ (c) $-\log_a b$ (d) $-\log_b a$

Q.8 The number of solutions of $\log_2(x - 1) = 2\log_2(x - 3)$ is

- (a) 2 (b) 1 (c) 6 (d) 7

Q.9 If $\log_y x = \log_z y = \log_x z$, then

- (a) $x < y < z$ (b) $x > y \geq z$ (c) $x < y \leq z$ (d) $x = y = z$

Q.10 If $a_n = 4n + 6$, find 15th term of the sequence.

- (a) 6 (b) 10 (c) 60 (d) 66

ANSWER KEY

1. (d)
2. (A)
3. (A)
4. (a)
5. (c)
6. (a)
7. (c)
8. (b)
9. (d)
10. (d)