Multiple choice questions - Sequences and nth term

Year: Year 9 · 10

Question 1 What is the nth term of 3, 7, 11, 15, . . .?

- ◯ **A.** $3n$
- ◯ **B.** $4n - 1$
- ◯ **C.** $4n + 1$
- ◯ **D.** $n + 4$

Question 2 The nth term of a sequence is 5n - 2. What is the 6th term?

- ◯ **A.** 28
- ◯ **B.** 30
- ◯ **C.** 32
- ◯ **D.** 3

Question 3 Which of these is a geometric sequence?

- ◯ **A.** 2, 4, 6, 8
- ◯ **B.** 1, 4, 9, 16
- ◯ **C.** 3, 6, 12, 24
- ◯ **D.** 5, 10, 15, 20

Question 4 Is 61 a term of 4n + 1?

- ◯ **A.** Yes, n = 15
- ◯ **B.** Yes, n = 16
- ◯ **C.** No
- ◯ **D.** Yes, n = 14

Question 5 The next term of 1, 1, 2, 3, 5, 8 is:

- ◯ **A.** 11
- ◯ **B.** 12
- ◯ **C.** 13
- ◯ **D.** 16

Question 6 What is the nth term of 10, 8, 6, 4, . . .?

- ◯ **A.** $2n + 8$
- ◯ **B.** $-2n + 12$
- ◯ **C.** $12 - n$

- ◯ **D.** $-2n + 10$

Question 7 What is the 10th square number?

- ◯ **A.** 20
- ◯ **B.** 81
- ◯ **C.** 100
- ◯ **D.** 121

Question 8 The first differences of a sequence are 4, 6, 8, 10. The sequence is:

- ◯ **A.** arithmetic
- ◯ **B.** geometric
- ◯ **C.** quadratic
- ◯ **D.** Fibonacci

Question 9 The nth term of a sequence is $n^2 + 3$. The 5th term is:

- ◯ **A.** 13
- ◯ **B.** 28
- ◯ **C.** 25
- ◯ **D.** 8

Question 10 Which term in 3n + 2 is 41?

- ◯ **A.** 12th
- ◯ **B.** 13th
- ◯ **C.** 14th
- ◯ **D.** 15th

Answer grid - Sequences and nth term

Year: Year 9

Question	Answer	Explanation
1	**B**	4n gives 4, 8, 12, 16; subtract 1.
2	**A**	30 - 2 = 28.
3	**C**	Multiplied by 2 each time.
4	**A**	4n = 60, n = 15.
5	**C**	5 + 8 = 13.
6	**B**	-2n gives -2, -4, ...; add 12.
7	**C**	$10^2 = 100$.
8	**C**	The second differences are constant (2).
9	**B**	25 + 3 = 28.
10	**B**	3n = 39, n = 13.