Quadratic Sequences

Question 1. Write the next two terms of the sequence: $2, 5, 10, 17, 26, \ldots$

[3 marks]

Question 2. Write the next two terms of the sequence: $1, 4, 9, 16, 25, \ldots$

[3 marks]

Question 3. Write the next two terms of the sequence: $3, 8, 15, 24, \ldots$

[3 marks]

Question 4. Find the nth term of the sequence: $1, 4, 9, 16, 25, \ldots$

[3 marks]

Question 5. Find the nth term of the sequence: $2, 6, 12, 20, 30, \ldots$

[3 marks]

Question 6. Find the nth term of the sequence: $5, 8, 13, 20, 29, \ldots$

[3 marks]

Question 7. Find the nth term of the sequence: $-1, 2, 7, 14, 23, \ldots$

[3 marks]

Question 8. Find the nth term of the sequence: $0, 3, 8, 15, 24, \ldots$

[3 marks]

Question 9. The nth term of a sequence is $n^2 + 3$. Find the 6th term.

[3 marks]

Question 10. The nth term is $n^2 - 2n + 1$. Find the 4th term.

[3 marks]

Question 11. The nth term is $2n^2 - 3n$. Find the 5th term.

[3 marks]

Question 12. Is 51 in the sequence with nth term $n^2 + 2$? Explain your answer.

[3 marks]

Question 13. Is 34 a term in the sequence with nth term $n^2 - n$?

[3 marks]

Question 14. For which value of n is the term in the sequence $2n^2 + 1$ equal to 101?

[3 marks]

Question 15. The 1st term of a quadratic sequence is 2, the 2nd term is 6, and the 3rd term is 12. Find the nth term.

[3 marks]

Question 16. A quadratic sequence has the nth term an^2+bn+c. It starts: $7, 12, 19, 28, \ldots$. Find the values of a, b, and c.

[3 marks]

Question 17. A sequence has second differences of 4. The first term is 1, and the second term is 6. Find the nth term.

[3 marks]

Question 18. Two quadratic sequences are: Sequence A: $n^2 + n$, Sequence B: $n^2 + 3n$. Find the first term that appears in both sequences.

[3 marks]

Question 19. A sequence is defined by $n^2 + 1$. What is the difference between the 10th and 5th terms?

[3 marks]

Question 20. A sequence is defined by $3n^2 - 2n + 1$. Show that the difference between the 2nd and 1st terms is 7.

[3 marks]
