S.1 Chapter 3 Introduction to Algebra Name:_____ ( )

3.3 Sequences

A. Guessing terms of a sequence

Guess and write down the next two terms for each of the following sequences. **(1 – 6)**.

1. 1, 4, 7, 10, …

2. –1, –3, –5, –7, …

3. 5, 10, 15, 20, …

4. $\frac{1}{4}, \frac{1}{5}, \frac{1}{6}, \frac{1}{7}, \ldots$

5. 1, 4, 9, 16, …

6. 1, 3, 6, 10, …

B. General term a sequence

In each of the following, T_n is the general term of the sequence. Find the first 3 terms of the sequence. **(7 – 9)**

7. $T_n = 4 - 5n$

8. $T_n = n^2 + 1$

9. $T_n = 1 + \frac{1}{n}$

10. The general term T_n of a sequence is $\frac{3n-1}{n+1}$. Find the 9th term and 41st term of the sequence.

11. It is given that the general term T_n of a sequence is $13 + 5n$.

(a) Find the first 2 terms of the sequence. **(b)** Is 72 a term of the sequence? Explain your answer.