Practice worksheet | Sequences and series

Recurrence rules and explicit terms

Name: _____ Date: _____

6 questions | 13 marks

1. Find the first four terms of $u_n = 2n^2 - 1$, $n \geq 1$. [2 marks]

2. $a_1 = 5$, $a_{n+1} = 2a_n - 1$. Find a_2, a_3, a_4. [2 marks]

3. For $b_n = 30 - 4n$, find b_7. Can a term equal zero for integer $n \geq 1$? [2 marks]

4. $c_0 = 10$, $c_{n+1} = 0.5c_n$. Find c_3. [2 marks]

5. Give an explicit rule for $7, 11, 15, 19, \ldots$ with first index 1. [2 marks]

6. Give two different sequences satisfying $u_{n+1} = u_n + 5$. [3 marks]