

15 Here are the first five terms of a quadratic sequence.

3      20      47      84      131

(a) Find an expression, in terms of  $n$ , for the  $n$ th term of this sequence.

(3)

The terms of a different sequence are given by the rule  $u_{n+1} = ku_n + k$  where  $k$  is a constant.

Given that  $u_1 = 9$  and  $u_2 = 4$

(b) find the value of  $u_4$

(3)

$u_4 =$  .....