

- 5 8; x ; 30; y ; ... has a quadratic pattern with a constant second difference of 2. Determine the values of x and y .
- 6 A sequence has a quadratic pattern $T_2 = 11$, $T_4 = -7$ and $T_7 = -64$. Determine a formula for the general term of the sequence.
- 7 The general term of a sequence with a constant second difference is $T_n = 3n^2 - 4n + 6$.
- Write down the first four terms of the sequence.
 - Determine an expression for the sequence of first differences.
 - What is the first difference between the 27th and 28th terms of the sequence.
 - Show that 325 is a term in the sequence.
- 8 Given the sequence 8; 18; 30; 44; ...
- Determine a formula for the general term of the sequence.
 - Determine the first term in the sequence with a value greater than 330.