

Exam Style Questions

Quadratic Sequences

1. Here are the first 5 terms of a quadratic sequence

9 17 29 45 65

Find an expression, in terms of n , for the n th term of this quadratic sequence.

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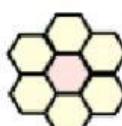
2. Here is a tile.



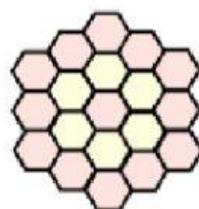
Here is a sequence of patterns made from these tiles.



Pattern 1



Pattern 2



Pattern 3

How many of these tiles are needed to make Pattern number 10?

3. The n th term of a sequence is $n^2 + 3n$
Two consecutive terms in the sequence have a difference of 38

Work out the two terms.

..... and

4. Prove that every term in the sequence $n^2 - 4n + 21$ is positive

