1. The first four terms of a quadratic sequence are shown below
Work out the next term.

7 11 17 25

.....

(2)

---

2. The first four terms of a quadratic sequence are shown below
Work out the next term.

6 12 22 36

.....

(2)

---

3. The n^{th} term of a quadratic sequence is $n^2 - 2n + 8$

Work out the first three terms of this sequence

....

(2)

---

4. A quadratic sequence has an n^{th} term of $2n^2 + 3n - 1$

Work out the value of the 6^{th} term of the sequence

.....

(2)

5. A sequence has an n^{th} term of $n^2 - 6n + 7$

Work out which term in the sequence has a value of 23.

.....

(2)

---

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

4 11 20 31 44

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

.....

(3)

---

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

4 10 18 28 40

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

.....

(3)

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

9 17 29 45 65

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

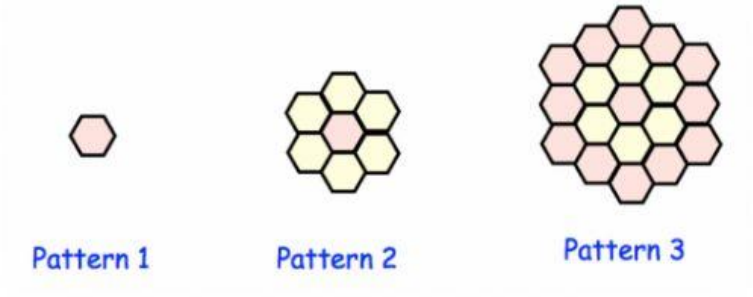
.....

(3)

---

9. Here is a tile.

Here is a sequence of patterns made from these tiles.



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

.....

(5)

10. The nth 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)

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

(4)