

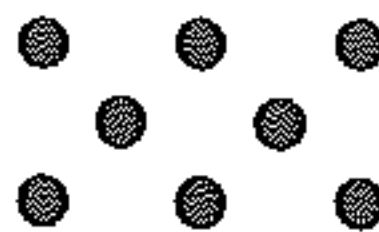
IGCSE – Sequences and nth term – 2

May 05 Paper 2

13



Pattern 1



Pattern 2



Pattern 3

The first three patterns in a sequence are shown above.

(a) Complete the table.

Pattern number	1	2	3	4
Number of dots	5			

(b) Find a formula for the number of dots, d , in the n th pattern.

[1]

Answer (b) $d = \dots\dots\dots$ [1]

(c) Find the number of dots in the 60th pattern.

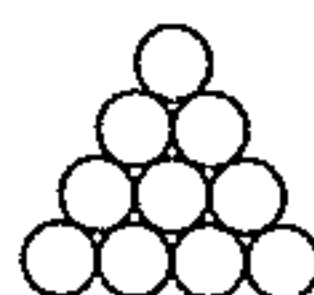
Answer (c) $\dots\dots\dots$ [1]

(d) Find the number of the pattern that has 89 dots.

Answer (d) $\dots\dots\dots$ [1]

Oct 05 Paper 2

1



The number of tennis balls (T) in the diagram is given by the formula

$$T = \frac{1}{2}n(n+1),$$

where n is the number of rows.

The diagram above has 4 rows.

How many tennis balls will there be in a diagram with 20 rows?

Answer $\dots\dots\dots$ [1]