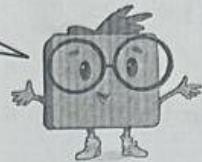


### Worksheet C: Make Special Number Sequences

1. Find the values of each of the following.

(a)  $4^2 = \underline{\hspace{2cm}}$

$4^2 = 4 \cdot 4$



(b)  $3^2 = \underline{\hspace{2cm}}$

(c)  $5^2 = \underline{\hspace{2cm}}$

(d)  $7^2 = \underline{\hspace{2cm}}$

2. Circle the square numbers.

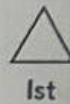
A square number is made by multiplying the number by itself.

17      25      38      36      64      66      88

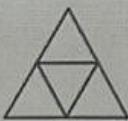
81      1      55      16      9      2      100



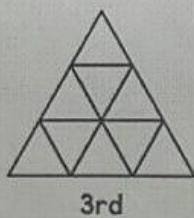
3. Complete the sequence.



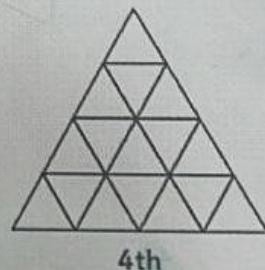
1st



2nd



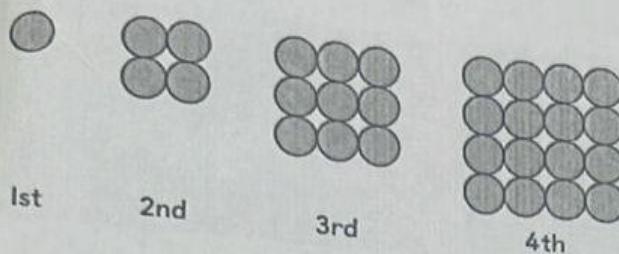
3rd



4th

1st term	2nd term	3rd term	4th term	5th term	6th term
1	4	9			

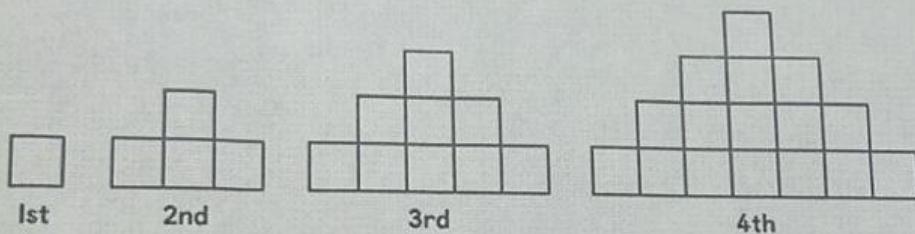
Look at the pattern below.



Complete the sequence.

1st term	2nd term	3rd term	4th term	5th term	6th term
1	4				

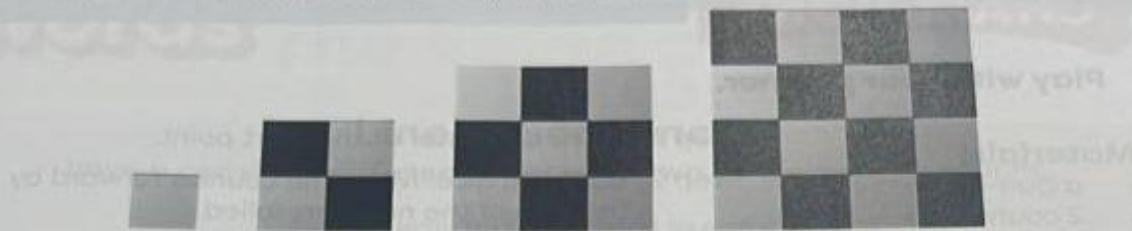
5. Look at the pattern below.



(a) Complete the sequence.

1st term	2nd term	3rd term	4th term	5th term	6th term
1	4				

6 Ralph looks at the chessboard pattern below.



He records the size of each term and the number of squares he sees in the table below.

Size of chessboard	$1 \times 1$	$2 \times 2$	$3 \times 3$	$4 \times 4$	$5 \times 5$	$6 \times 6$
Number of squares	1	5	14	30		

a Complete the table. How did you do it?

 b What pattern do you notice between the size of the chessboard and the total number of squares?

Make a generalisation about the number of squares on any chessboards.

Tick (✓) to show what you can do.

I can recognise square numbers from 1 to 100.

I can recognise and extend spatial patterns of squares and triangular numbers.