

# Algebra - Sequences

Here are the first five terms of an arithmetic sequence.

2                      6                      10                      14                      18

(a) Find, in terms of  $n$ , an expression for the  $n$ th term of this sequence.

.....  
(2)

(b) An expression for the  $n$ th term of another sequence is  $10 - n^2$

(i) Find the third term of this sequence.

.....

(ii) Find the fifth term of this sequence.

.....  
(2)

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Here are the first five terms of an arithmetic sequence.

4	8	12	16	20	Rule +4
2	6	10	14	18	

(a) Find, in terms of  $n$ , an expression for the  $n$ th term of this sequence.

$$n^{\text{th}} \text{ term} = 4n - 2$$

$$\begin{array}{l} n^{\text{th}} \text{ term} = 4n - 2 \\ \hline \end{array} \quad (2)$$

(b) An expression for the  $n$ th term of another sequence is  $10 - n^2$

(i) Find the third term of this sequence.

$$\begin{array}{l} 10 - 3^2 \\ = 10 - 9 \\ = 1 \end{array}$$

$$\begin{array}{l} 1 \\ \hline \end{array}$$

(ii) Find the fifth term of this sequence.

$$\begin{array}{l} 10 - 5^2 \\ = 10 - 25 \\ = -15 \end{array}$$

$$\begin{array}{l} -15 \\ \hline \end{array} \quad (2)$$