14 **(a)** These are the first four terms of a sequence.

29 22 15 8

Write down the next two terms.

..... , ... [2]

8 For this sequence

1 6 11 16 21 …

(a) find the next term

..... [1]

(b) find an expression for the *n*th term.

..... [2]

8 Find an expression for the *n* th term of each sequence.

(a) 1, 7, 13, 19, 25, …

..... [2]

(b) These are the first four terms of another sequence.

7 10 13 16

Find an expression for the *n*th term of this sequence.

..... [2]

10 22, 17, 12, 7, 2, …

(a) Find the next term of the sequence.

..... [1]

(b) Find the *n*th term of the sequence.

..... [2]

4 23, 17, 11, 5, ...

(a) Write down the next number in this sequence.

..... [1]

(b) Find the *n*th term of this sequence.

..... [2]

(b) These are the first five terms of a different sequence.

25 18 11 4 −3

Find the *n*th term of this sequence.

..... [2]

7 These are the first 4 terms of a sequence.

11 8 5 2

(a) Find the next term of this sequence.

..... [1]

(b) Find the nth term of this sequence.

..... [2]

3 These are the first four terms in a sequence.

27 19 11 3

(a) Write down the next term.

..... [1]

(b) Find an expression, in terms of n, for the nth term of the sequence.

..... [2]

19 Find the nth term of each sequence.

(a) 11, 8, 5, 2, −1, …

..... [2]

(b) 13, 17, 21, 25, …

Find the nth term of this sequence.

..... [2]

10 These are the first four terms of a sequence.

3 −1 −5 −9

(a) Find the next term in this sequence.

..... [1]

(b) Find the nth term.

..... [2]

9 In a sequence

$$T_1 = 17 \qquad T_2 = 12 \qquad T_3 = 7 \qquad T_4 = 2.$$

Find

(a) T_5

..... [1]

(b) T_n.

..... [2]

5 **(a)** The nth term of a sequence is $60 - 8n$.

Find the largest number in this sequence.

..... [1]

(b) Here are the first five terms of a different sequence.

12 19 26 33 40

Find an expression for the nth term of this sequence.

..... [2]

6 **(a)** A sequence has nth term $\frac{n}{2n+3}$.

(i) Find the first three terms of this sequence.

Give your answers as fractions.

..... , ... , ... [2]

(ii) The kth term of this sequence is $\frac{12}{25}$.

Find the value of k.

$k =$ ..... [2]

11 **(a)** These are the first four terms of a sequence.

11 7 3 −1

(i) Write down the next term.

..... [1]

(ii) Write down the term to term rule for this sequence.

..... [1]

(iii) Find the nth term of this sequence.

..... [2]

(b) The nth term of a different sequence is $\frac{2n}{n+1}$.

(i) Find the difference between the 5th term and the 6th term of this sequence.
Give your answer as a fraction.

..... [2]

(ii) Is $\frac{3}{4}$ a term in this sequence?
Show how you decide.

[3]