Name:

Level 2 Further Maths

Sequences



Ensure you have: Pencil or pen

Guidance

- 1. Read each question carefully before you begin answering it.
- 2. Check your answers seem right.
- 3. Always show your workings

Revision for this topic

www.corbettmaths.com/more/further-maths/



- 1. The nth term of a sequence is $\frac{6n-3}{10n}$
 - (a) Which term in the sequence is equal to 0.58?

$$0.2n - 3 = 0$$
 $0.2n = 3$

(b) Work out the difference between the 5th and 12th terms

2. Here is a linear sequence

How many terms in the sequence are positive?

1924 1849 1774 ...

1999 - 75~ 7 0

3. The first three terms in a sequence are

$$\frac{5}{9}$$
, $\frac{11}{14}$, $\frac{17}{19}$,

Write down the nth term for the sequence

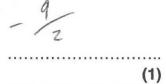
4. The nth term of a sequence is $\frac{2n+1}{3n-5}$

Write down the limiting value of the sequence $n \to \infty$

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5. The nth term of a sequence is $\frac{1-9n}{2n+4}$

Write down the limiting value of the sequence $n \to \infty$



- 6. The nth term of a sequence is $\frac{240 8n}{70 + 4n}$
 - (a) Work out the term in the sequence that is equal to 0

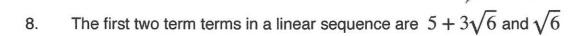
(b) Write down the limiting value of the sequence as $n \to \infty$

- 7. The nth term of a sequence is $\frac{3n}{8n+13}$
 - (a) Work out the position of the term that has a value of $\frac{1}{3}$

$$\frac{3n}{8n+13} = \frac{1}{3}$$
 $8n+13 = 9n$
 $n = 13$

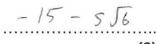
- 13th
- (b) Write down the limiting value of $\frac{3n}{8n+13}$ as $n \to \infty$

3/8 (1)



What is the fifth term in the sequence?

3rd term
$$4^{14}$$
 term 5^{14} term $-15-556$



(3)

The first term of a sequence is 5-2a9.

The term-to-term rule of the sequence is subtract 4a and then multiply by 2

The fourth term of the sequence is 58

Work out the second term of the sequence.

10. The nth term of sequence A is $\frac{n+2}{2n-3}$

The nth term of sequence B is $\frac{3n-14}{n+5}$

The qth term in sequence A is the same as the qth term in sequence B.

Work out the value of q

$$\frac{q+2}{2q-3} \times \frac{3q-14}{q+5}$$

$$q^{2}+7q+10 = 6q^{2}-37q+42$$

$$0 = 5q^{2}-44q+32$$

$$0 = \left(2-8\right)\left(5q-4\right)$$

$$q = 8 \text{ or } q = 45$$

S (4)