

You will probably need more paper to show your workings out - if you have small handwriting the space at the bottom of this page may be enough

1. Here are the first six terms of a Fibonacci sequence.

2 1 3 4 7 11

The rule to continue a Fibonacci sequence is,

the next term in the sequence is the sum of the two previous terms.

- (a) Find the 8th term of the sequence.

(a)

- (b) The first four terms of a different Fibonacci sequence are

u v $u + v$ $u + 2v$

Show that the 8th term of this sequence is $8u + 13v$

2. The first three terms of a Fibonacci sequence are

a b $a + b$

Show that the 5th term of this sequence is $2a + 3b$

3. The first three terms of a Fibonacci sequence are

k k $2k$

Show that the 8th term of this sequence is $21k$

4. The first four terms of a Fibonacci sequence are

c d $c + d$ $c + 2d$

Show that the 7th term of this sequence is $5c + 8d$

Answers: 1a) 29 1b) $u + v + u + 2v = 2u + 3v = 5$ th term

$u + 2v + 2u + 3v = 3u + 5v = 6$ th term and $2u + 3v + 3u + 5v = 5u + 8v = 7$ th term

$3u + 5v + 5u + 8v = 8u + 13v = 8$ th term

2 to 4) Check you have enough workings out - because the question tells you the answer !