Linear sequence and nth term

Exercise

Find the difference of the following sequence.

1) 2, 5, 8 … difference (d) =_____

2) 3, 8, 13 … difference (d) =_____

3) ……, 20, 27, 34… difference (d) =_____

4) ……, -7, -10, -13, -16… difference (d) =_____

5) -12, -9, -6 … difference (d) =_____

Find the next three term of the following sequences.

6) 2, 5, 7,_____, _____, _____

7) 14, 19, 24, _____, _____, _____

8) 20, 27, 34, 41,_____, _____, _____

9) 15, 12, 9,_____, _____, _____

10) 10, 20 , 30 ,_____, _____, _____

Find the previous three term of the given sequence

11) , _____, _____, _____, 7, 10, 13…..

12) _____, _____, _____, 10, 15, 20….

13) _____, _____, _____, 1, 4, 7……

14) _____,_____, _____, 15, 12, 9….

15) _____, _____, _____, 7, 14, 21……

Find the n^{th} term of the following sequence

16) 5, 7, 9…. n^{th} term=_____

17) 14, 19, 24 …. n^{th} term=_____

18) 20, 27, 34, 41…. n^{th} term=_____

19) 25, 20, 15…. n^{th} term=_____

20) 36, 42, 48….. n^{th} term=_____

Find 25th 50th and the 100th term of the following sequence where nth is given.

21) 2n – 1 when n= 25, _____, when n=50, _____, and when n=100, _____

22) 5n - 2 when n= 25, _____, when n=50, _____, and when n=100, _____

23) 3n – 1 when n= 25, _____, when n=50, _____, and when n=100, _____

24) 3n + 2 when n= 25, _____, when n=50, _____, and when n=100, _____

25) n^2 when n= 25, _____, when n=50, _____, and when n=100, _____

Here are the first four terms of a number sequence.
5, 9, 13, 17.....

26) Write down the next term of the number sequence. _____

27) Explain how you found your answer.

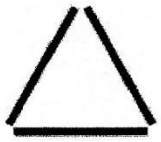
_____

28) The 25th term of the number sequence is 101
Work out the 26th term of the number sequence. _____

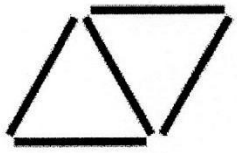
29) 20 cannot be a term in this number sequence. Explain why

_____

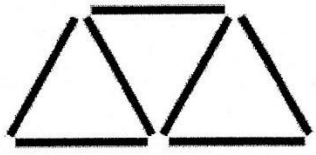
30) Here are some patterns made from sticks.



Pattern number 1



Pattern number 2



Pattern number 3

a) Complete the table.

Pattern number	1	2	3	4	5	6
Number of sticks	**3**	5	7			

b) How many sticks are in Pattern number 12? _____

Ben wants to find the number of sticks in Pattern number 100

c) Write down a method he could use.

_____

_____