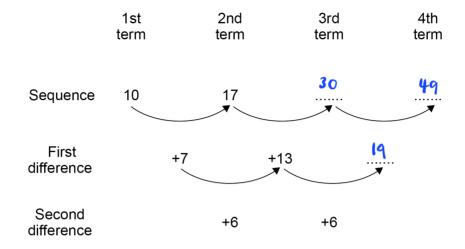
## 1 The first two terms of a quadratic sequence are 10 and 17

Here is some information about the sequence.



Work out an expression for the nth term of the sequence.

[4 marks]

$$q = \frac{6}{\lambda} = 3$$

an = 
$$3n^2 = 3(1)^2$$
,  $3(2)^2$ ,  $3(3)^2$ ,  $3(4)^2$   
=  $3$ ,  $12$ ,  $27$ ,  $48$   
Sequence =  $10$ ,  $17$ ,  $30$ ,  $49$   
difference =  $7$ ,  $5$ ,  $3$ ,  $1$ 

2 Here are the first four terms of a quadratic sequence.

3

20

84

Work out an expression for the nth term of the sequence.

47

[4 marks]

3

20

84

Ist diff:

17

27

37

2nd diff:

10

10

47

$$\alpha : \alpha = \frac{10}{2} = 5$$
 .  $5n^2$ 

3 x 5 tb = 17

C: 5x12 + 2x1 + c = 3

nth term: 5n2 + 2n - 4

Answer  $5n^2 + 2n - 4$