Linear Sequence

x	1	2	3	4	5	6
ax + b	a + b	2a + b	3a + b	4a + b	5a + b	6a + b

a a a a a

x	1	2	3	4	5	6
ax + b	1	4	7	10	13	16

3 3 3 3 3

So,

$a = 3$

$a + b = 1$

$3 + b = 1$

$b = -2$

Therefore, the rule for The above sequence is:

$3x - 2$

Quadratic Sequence

x	ax^2+bx+c
0	c
1	a + b + c
2	4a + 2b + c
3	9a + 3b + c
4	16a + 4b + c
5	25a + 5b + c
6	36a + 6b + c

a + b

2a

3a + b

2a

5a + b

2a

7a + b

2a

9a + b

2a

11a + b

x	ax^2+bx+c
0	0
1	1
2	6
3	15
4	28
5	45
6	66

1

4

5

4

9

4

13

4

17

4

21