

Fill in the Blanks

Nth Term of a Quadratic Sequence

Sequence	2	7	14	23
First Difference		5	7	9
Second Difference		2	2	
$\boxed{1} n^2$	1	4	9	16
Sequence minus n^2	1	3	5	7
Linear nth term	$2n - 1$			
Quadratic nth term	$n^2 + 2n - 1$			

Sequence	7	14	25	40
First Difference		7	11	15
Second Difference		4	4	
$\boxed{2} n^2$	2	8	18	32
Sequence minus n^2	5	6	7	8
Linear nth term	$n + 4$			
Quadratic nth term	$2n^2 + n + 4$			

Sequence	-1	10	27	50
First Difference		11	17	23
Second Difference		6	6	
$\boxed{3} n^2$	3	12	27	48
Sequence minus n^2	-4	-2	0	2
Linear nth term	$2n - 6$			
Quadratic nth term	$3n^2 + 2n - 6$			

Sequence	6	8	12	18
First Difference		2	4	6
Second Difference		2	2	
$\boxed{1} n^2$	1	4	9	16
Sequence minus n^2	5	4	3	2
Linear nth term	$-n + 6$			
Quadratic nth term	$n^2 - n + 6$			

Sequence	2.5	8	14.5	22
First Difference		5.5	6.5	7.5
Second Difference		1	1	
$\boxed{0.5} n^2$	0.5	2	4.5	8
Sequence minus n^2	2	6	10	14
Linear nth term	$4n - 2$			
Quadratic nth term	$0.5n^2 + 4n - 2$			

Sequence	3	3	1	-3
First Difference		0	-2	-4
Second Difference		-2	-2	
$\boxed{-1} n^2$	-1	-4	-9	-16
Sequence minus n^2	4	7	10	13
Linear nth term	$3n + 1$			
Quadratic nth term	$-n^2 + 3n + 1$			