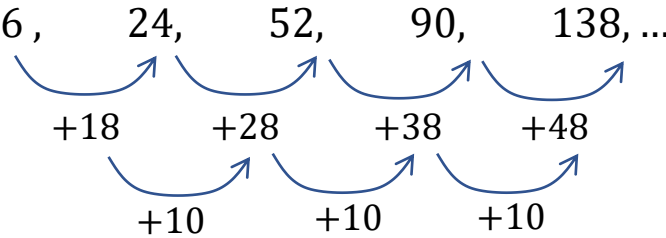
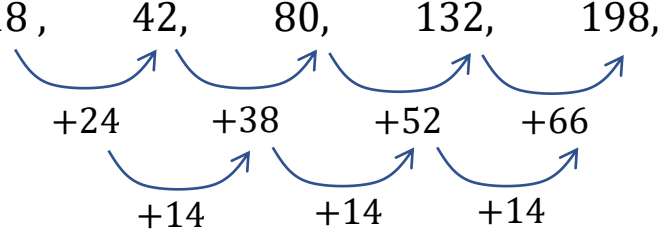
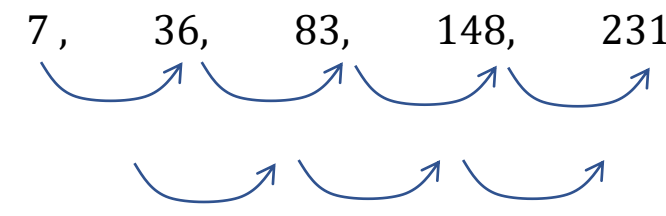
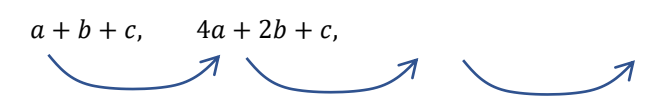


Sequence	2 nd diff ÷ 2	Quadratic Part	Linear Part	Full Answer
10, 21, 38, 61, 90, ... 	$6 \div 2 = 3$	$3n^2$ 3 12 27 48 75 10 21 38 61 90 <hr/> 7 9 11 13 15	$2n$ 2 4 6 8 10 +5 7 9 11 13 15 	$3n^2 + 2n + 5$
14, 39, 76, 125, 186 	$12 \div 2 = 6$	$6n^2$ 6 24 54 96 150 14 39 76 125 186 <hr/> 8 15 22 29 36	$7n$ 7 14 21 28 35 +1 8 15 22 29 36 	
1, 10, 23, 40, 61, ... 	$4 \div 2 = 2$	$2n^2$ 2 8 18 32 50 1 10 23 40 61 <hr/> -1 2 5 8 11	-4 -1 2 5 8 11 	
9, 17, 27, 39, 53, ... 	$2 \div 2 = 1$	n^2 1 4 9 16 25 9 17 27 39 53 <hr/> 8 13		

Sequence	2 nd diff ÷ 2	Quadratic Part	Linear Part	Full Answer
<p>6, 24, 52, 90, 138, ...</p> 	$10 \div 2 = 5$	$5n^2$ 6 24 52 90 138		
<p>18, 42, 80, 132, 198,</p> 	$14 \div 2 = 7$			
<p>7, 36, 83, 148, 231,</p> 				
<p>$a + b + c,$ $4a + 2b + c,$</p>  <p>(The last question shows why we have to half the 2nd difference to get the number before the n^2)</p>		an^2	$bn + c$	