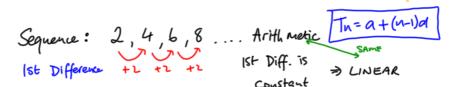
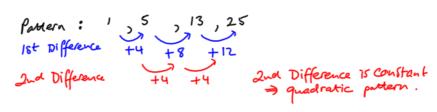


Section 4.6 Number patterns - Revisited





Text & Tests 6

	Pattern	To find a
1st difference constant	$T_n = an + b$	a = 1st difference
2nd difference constant	$T_n = an^2 + bn + c$	2a = 2nd difference
3rd difference constant	$T_n = an^3 + bn^2 + cn + d$	6a = 3rd difference

	Pattern	To find a		
1st difference constant	$T_n = an + b$	a = 1st difference	a3	
2nd difference constant	$T_n = an^2 + bn + c$	2a = 2nd difference	a=2=	
3rd difference constant	$T_n = an^3 + bn^2 + cn + d$	6a = 3rd difference	a=72	
Example 1				
cubic polynomial. Term Patt Ist Indi 3rd	2/h -1 13 5 Nff. 14 38 Nff. 24 3	T4 T5 1 125 247	as a	
Chric > a = D =	3rd difference 3 cubic 5hape 3	e is = 12 which pattern $AN^3 + bn^2 + c$ $2N^3 + bn^2 + c$		
n=1 , T,=-1	→ 2(1)³+b(1)2+c(1)+d=	-1	

b+c+d=-3

