

1. a) $a_n = 4n+2$ b) $a_n = 3(3^n-1)/2$ c) $a_n = n^2 + 2n - 3$ d) $a_n = (-1)^n \cdot \frac{3}{2^{n-1}}$

2. a) $a_n = (-1) \cdot 5^n + 3 \cdot 2^n$ b) $a_n = 6 \cdot 2^n - 2n \cdot 2^n$
 c) $a_n = 9 \cdot 2^n - 4 \cdot 3^n$ d) $a_n = 3 - (-5)^n$ e) $a_n = 1$

3. $k = 10$; $a_n = \frac{2}{7} \cdot 5^n + \frac{5}{7} \cdot (-2)^n$