Enunciados

Averigua el término general de las siguientes sucesiones escribiéndolo con una sola expresión algebraica sencilla. Se sugiere usar «n» como variable muda.

① a → –5, –2, 1, 4, 7, ...	② b → –4, –8, –12, –16, ...
③ c → 7, 7, 7, 7, 7, ...	④ d → –8, 8, –8, 8, –8, ...
⑤ e → ⅓, 1, 3, 9, 27, ...	⑥ f → $\frac{8}{3}$, $\frac{9}{4}$, 2, $\frac{11}{6}$, $\frac{12}{7}$, ...
⑦ g → 16, 8, 4, 2, 1, ½, ...	⑧ h → 0, 3, 8, 15, 24, ...
⑨ i → 4, 9, 16, 25, 36, ...	⑩ j → –2, 5, 12, 19, 26, ...
⑪ k → 3, 9, 27, 81, ...	⑫ l → 4, 10, 28, 82, ...
⑬ m → 4, 11, 30, 85, ...	⑭ p → –3, 7, –11, 15, –19, ...
⑮ q → $\frac{1}{2}$, 2, $\frac{9}{2}$, 8, $\frac{25}{2}$, ...	⑯ r → $-\frac{3}{4}$, $-\frac{1}{6}$, $\frac{1}{8}$, $\frac{3}{10}$, ...
⑰ s → $\frac{1}{5}$, $\frac{1}{3}$, $\frac{4}{7}$, 1, $\frac{16}{9}$, ...	⑱ t → 1, $\frac{2}{5}$, $\frac{1}{7}$, 0, $-\frac{1}{11}$, ...
⑲ u → 0, $\frac{1}{5}$, $\frac{1}{3}$, $\frac{3}{7}$, 2, ...	⑳ v → 1, $\frac{3}{2}$, 3, $\frac{27}{4}$, $\frac{81}{5}$, ...
㉑ w → –5, 3, –1, –1, 3, ...	㉒ z → 2, 0, 2, 0, 2, 0, ...
㉓ a → $\frac{1}{2}$, $\frac{2}{3}$, 1, $\frac{8}{5}$, $\frac{8}{3}$, ...	㉔ b → $\frac{1}{3}$, $\frac{1}{2}$, $\frac{4}{5}$, $\frac{4}{3}$, $\frac{16}{7}$, ...
㉕ c → 2, 3, $\sqrt{14}$, $\sqrt{19}$, ...	㉖ d → –1, 0, 1, $\sqrt[3]{2}$, ...
㉗ e → 1, 0, 1, 4, 9, ...	㉘ f → 2, 1, 2, 16, 512, ...
㉙ g → 1, $\frac{2}{3}$, $\frac{1}{2}$, $\frac{2}{5}$, $\frac{1}{3}$, ...	㉚ h → $\frac{3}{2}$, $\frac{8}{7}$, 1, $\frac{12}{13}$, $\frac{7}{8}$, ...
㉛ i → –1, 0, 1, 8, 27, ...	㉜ j → 0, 1, 2, 9, 28, ...
㉝ k → 1, 0, –1, 8, –27, ...	㉞ l → –2, 1, 0, 9, 26, ...
㉟ m → $\frac{1}{5}$, 1, 5, 25, 125, ...	㊱ p → $-\frac{4}{5}$, 0, 4, 24, 124, ...
㊲ q → –5, –2, 1, 4, 7, ...	㊳ r → –3, –4, 3, 2, 9, ...
㊴ s → 0, 6, 26, 60, 120, ...	㊵ t → 2, 10, 32, 68, 130, ...
㊶ u → 5, $\frac{8}{5}$, $\frac{11}{9}$, $\frac{14}{13}$, 1, ...	㊷ v → $\frac{8}{3}$, 5, $\frac{22}{3}$, $\frac{29}{3}$, 12, ...
㊸ w → 13, 30, 47, 64, ...	㊹ z → 33, 14, –5, –24, ...

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Soluciones

① $a_n = 3n-8$	② $b_n = -4n$
③ $c_n = 7$	④ $d_n = (-1)^n \cdot 8$
⑤ $e_n = 3^{n-2}$	⑥ $f_n = \dfrac{n+7}{n+2}$
⑦ $g_n = 2^{-n+5}$	⑧ $h_n = n^2-1$
⑨ $i_n = (n+1)^2$	⑩ $j_n = 7n-9$
⑪ $k_n = 3^n$	⑫ $l_n = 3^n+1$
⑬ $m_n = 3^n+n$	⑭ $p_n = (-1)^n \cdot (4n-1)$
⑮ $q_n = \dfrac{n^2}{2}$	⑯ $r_n = \dfrac{2n-5}{2n+2}$
⑰ $s_n = \dfrac{2^{n-1}}{n+4}$	⑱ $t_n = \dfrac{-n+4}{2n+1}$
⑲ $u_n = \dfrac{n-1}{n+3}$	⑳ $v_n = \dfrac{3^{n+1}}{n}$
㉑ $w_n = (-1)^n \cdot (2n-7)$	㉒ $z_n = (-1)^{n+1}+1$
㉓ $a_n = \dfrac{2^{n-1}}{n+1}$	㉔ $b_n = \dfrac{2^{n-1}}{n+2}$
㉕ $c_n = \sqrt{5n-1}$	㉖ $d_n = \sqrt[3]{n-1}$
㉗ $e_n = (n-2)^2$	㉘ $f_n = 2^{(n-2)^2}$
㉙ $g_n = \dfrac{2}{n+1}$	㉚ $h_n = \dfrac{2n+4}{3n+1}$
㉛ $i_n = (n-2)^3$	㉜ $j_n = (n-2)^3+1$
㉝ $k_n = (-1)^n(n-2)^3$	㉞ $l_n = (n-2)^3+(-1)^n$
㉟ $m_n = 5^{n-2}$	㊱ $p_n = 5^{n-2}-1$
㊲ $q_n = 3n-8$	㊳ $r_n = 3n-8+2 \cdot (-1)^{n+1}$
㊴ $s_n = n^3-n$	㊵ $t_n = n^3+n$
㊶ $u_n = \dfrac{3n+2}{4n-3}$	㊷ $v_n = \dfrac{7n+1}{3}$
㊸ $w_n = 17n+13$	㊹ $z_n = -19n+52$