

Sequences Examples

1. $\{1, 2, 4, 8, 16, \dots\}$

2. $\{12, -6, 3, -1.5, 0.75, \dots\}$

3. $\{3, 10, 17, 24, 31, 38, \dots\}$

4. $\{1, 2, 4, 7, 11, 16, 22, 29, \dots\}$

5. $\{1, 1, 2, 3, 5, 8, 13, 21, 34, \dots\}$

6. $\{2, 5, 10, 17, 28, 41, \dots\}$

7. $\left\{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6}, \dots\right\}$

8. $\left\{\frac{1}{2}, \frac{3}{4}, \frac{7}{8}, \frac{15}{16}, \frac{31}{32}, \dots\right\}$

9. $\{1, 3, 6, 10, 15, 21, 28, \dots\} = \begin{cases} a_n = a_{n-1} + n, & n \geq 2 \\ a_1 = 1 \end{cases}$

10. $\{4, 11, 31, 89, 259, 761, 2251, 6689, \dots\} = \begin{cases} a_n = 5a_{n-1} - 6a_{n-2}, & n \geq 3 \\ a_1 = 4 \\ a_2 = 11 \end{cases}$

11. $\{-12, 12, -72, -48, -672, -1728, \dots\} = \begin{cases} a_n = 2a_{n-1} + 8a_{n-2}, & n \geq 3 \\ a_1 = -12 \\ a_2 = 12 \end{cases}$

12. $\{1, 1, 2, -1, 13, -44, 197, -811, 3418, \dots\} = \begin{cases} a_n = -3a_{n-1} + 5a_{n-2}, & n \geq 3 \\ a_1 = 1 \\ a_2 = 1 \end{cases}$