


Worksheet: Basics of Sequences

This worksheet will help you understand the basics of sequences. You can read the study guide: [Basics of Sequences](#) before trying these questions.

Basics of Sequences study guide



Model answers to this sheet



Join each sequence with its correct general term, recurrence relation and relevant properties.

$$s_n = s_{n-1} + s_{n-2}$$

$$s_n = \frac{3^{n-1}}{9}$$

$$s_n = \left(\frac{1+\sqrt{5}}{2}\right)^n + \left(\frac{1-\sqrt{5}}{2}\right)^n$$

$$s_{n+1} = \frac{-s_n}{3}$$

$$s_{n+1} = s_n + 3$$

$$s_{n+1} = 3s_n$$

$$s_n = 3 - \frac{n-1}{3}$$

$$s_n = 9(-3)^{1-n}$$

$$s_{n+1} = \frac{3s_n - 1}{3}$$

$$s_n = 3n - 9$$

$$-6, -3, 0, 3, 6, \dots$$

$$s_n = \frac{(-1)^{n-1}}{n}$$

$$1, 3, 4, 7, 11, 18, 29, \dots$$

$$\frac{1}{9}, \frac{1}{3}, 1, 3, 9, \dots$$

$$3, \frac{8}{3}, \frac{7}{3}, 2, \frac{5}{3}, \dots$$

$$9, -3, 1, -\frac{1}{3}, \frac{1}{9}, \dots$$

$$\frac{1}{1}, -\frac{1}{2}, \frac{1}{3}, -\frac{1}{4}, \frac{1}{5}, \dots$$

Arithmetic

Alternating

Divergent

Geometric

Convergent



This worksheet is one of a series on mathematics produced by the Learning Enhancement Team with funding from the UEA Alumni Fund. Scan the QR-code with a smartphone app for [more resources](#).

