

Sequences

Question

Which type of function is defined by this recursive sequence?

$$a_1 = 3$$

$$a_{n+1} = a_n + (2n - 1)$$

- (a) Linear
- (b) Exponential
- (c) Quadratic
- (d) None of these

Answer: (c) The expression $(2n-1)$ represents a constant second finite difference. No work is necessary, but students may create a table.