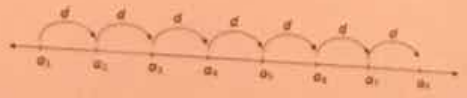
ARITHMETIC	GEOMETRIC
related to LINEAR functions	related to EXPONENTIAL functions
EXPLICIT FORMULA	EXPLICIT FORMULA
RECURSIVE FORMULA	RECURSIVE FORMULA

ARITHMETIC

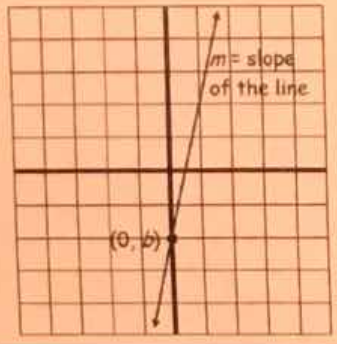
GEOMETRIC

COMMON DIFFERENCE

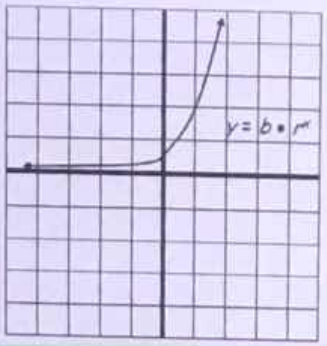


fold line

Linear Function



Exponential Function



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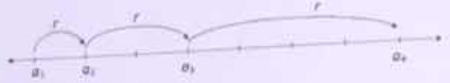
COMMON RATIO



Example

$2, 6, 10, 14, \ldots$

$d = 4$

$a_n = 2 + 4(n - 1)$

$= 2 + 4n - 4$

$= 4n - 2$

Explicit Formula

$a_n = a_1 + d\,(n - 1)$

$a_n = n^{th}$ term

a_1 = first term

d = common difference

n = term number

Explicit Formula

$a_n = a_1 \bullet r^{(n-1)}$

$a_n = n^{th}$ term

a_1 = first term

r = common ratio

n = term number

Example

$2, 6, 18, 54, \ldots$

$r = 3$

$a_n = 2 \bullet 3^{n-1}$

Example

$2, 6, 10, 14, \ldots$

$d = 4$

$a_n = a_{n-1} + 4$

Recursive Formula

$a_n = a_{n-1} + d$

$a_n = n^{th}$ term

a_{n-1} = previous term

d = common difference

Recursive Formula

$a_n = a_{n-1} \bullet r$

$a_n = n^{th}$ term

a_{n-1} = previous term

r = common ratio

Example

$2, 6, 18, 54, \ldots$

$r = 3$

$a_n = a_{n-1} \bullet 3$