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Explicit Equations

Ex. $-8, -2, 4, 10, \dots$

Explicit equation lets you find the value of any term; $t(n)$, in a sequence.

Step 1 Find sequence generator (common difference)

term #	0	1	2	3	4
$t(n)$	-14	-8	-2	4	10
		\uparrow	\uparrow	\uparrow	\uparrow
		-6	+6	+6	+6

$d = 6$

Step 2 Find $t(0)$ → from a table, or do substitution

term 0, $t(0) = -14$

sequence generator $d = 6$

$t(n) = dn + t(0)$

To find the 10th term → $t(n) = 6n - 14$ | Explicit Equation

$t(10) = 6(10) - 14$

$t(10) = 60 - 14$

seq. gen. position of your term $t(0)$

$t(10) = 46$ Recursive Equations

Recursive equation only lets you find the next term in the sequence.

Step 1 need one term, $t(1) = -8$

Step 2 need sequence generator, $d = 6$

$t(1) = -8 ; t(n+1) = t(n) + 6$ | Seq. Gen.

next term the term you know

To find the next term: $t(n+1) = t(n) + 6$

$t(1+1) = (-8) + 6$

$t(2) = -2$