

1, 3, 5, 7, ...

✓ ✓ ✓
+2 +2 +2

Arithmetic Sequence $a_n = -1 + 2n$

Common difference = 2

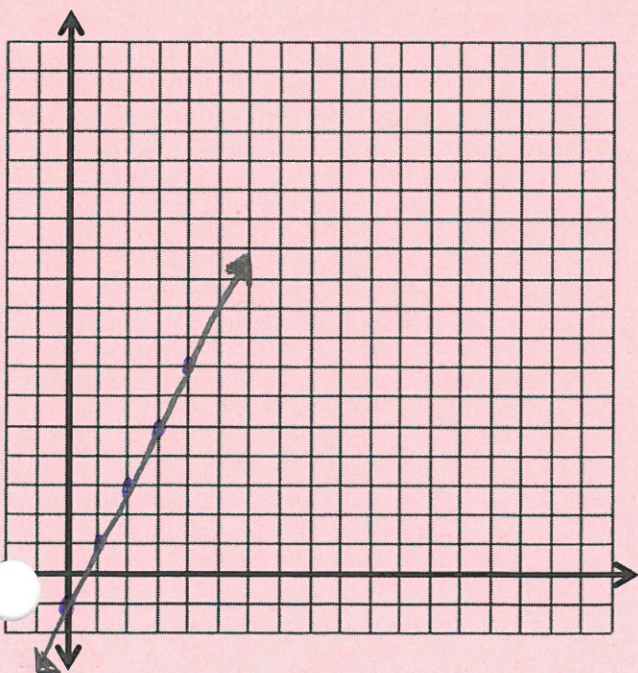
Zero term is -1

Linear Function $y = 2x - 1$

Slope = 2

y-int = -1

x	y
0	-1
1	1
2	3
3	5
4	7
-1	-3
-2	-5



1, 3, 9, 27, ...

✓ ✓ ✓
x3 x3 x3

Geometric Sequence $a_n = \frac{1}{3} \cdot 3^n$

Common ratio = 3

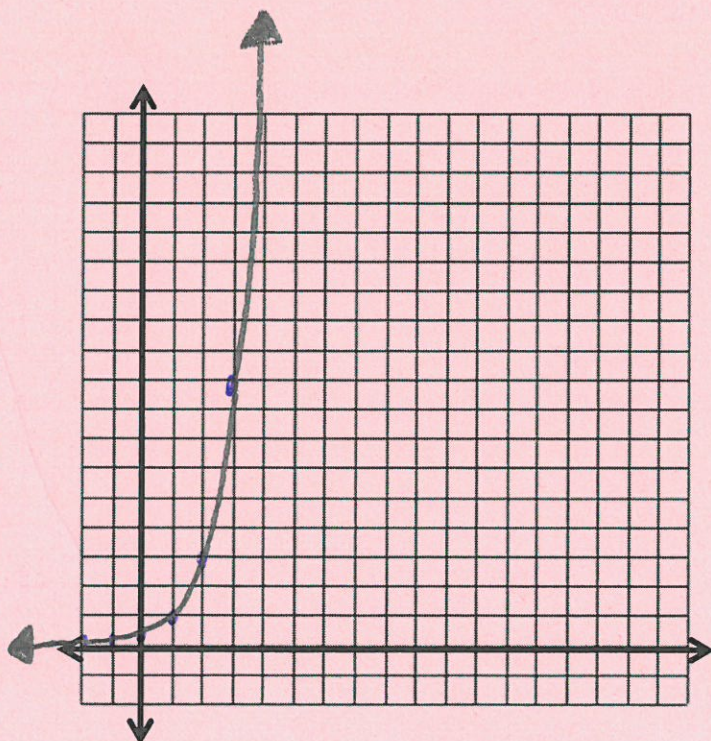
Zero term is $\frac{1}{3}$

Exponential Function $y = \frac{1}{3} \cdot 3^x$

y-int = $\frac{1}{3}$

base = 3

x	y
0	$\frac{1}{3}$
1	1
2	3
3	9
4	27
-1	$\frac{1}{9}$
-2	$\frac{1}{27}$



$$\begin{array}{cccc}
 & +1 & +1 & +1 \\
 & \wedge & \wedge & \wedge \\
 +2 & +3 & +4 & +5 \\
 \wedge & \wedge & \wedge & \wedge \\
 1, & 3, & 6, & 10, & 15\dots
 \end{array}$$

a. List the next 5 terms of this sequence.

21, 28, 36, 45, 55

b. What are some ways you would describe this sequence?

NO common difference the first time

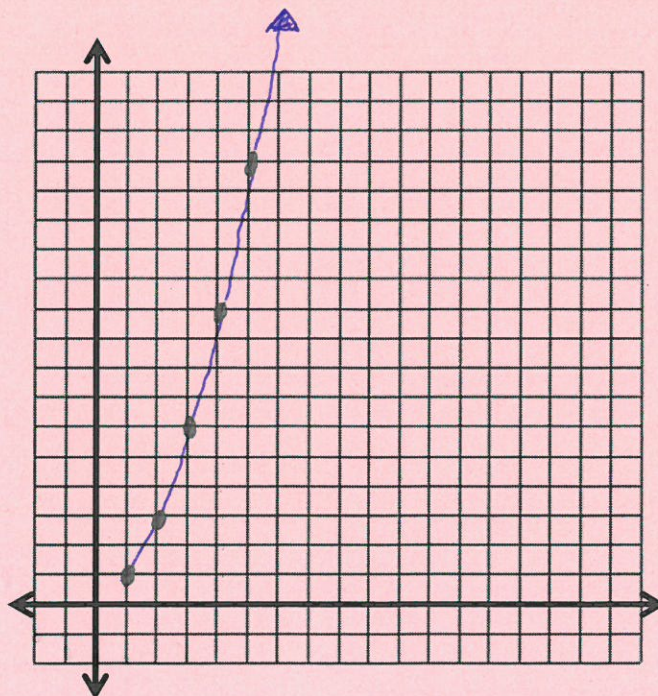
NO common ratio.

It is going up by one more each term.

The second difference is +1.

c. Graph the sequence as if it were a function

x	y
1	1
2	3
3	6
4	10
5	15



What is going on for x values less than 1?