

## Plotting Points on Straight Lines

### Starter

- (Review of Y7 material)** The  $n$ -th term of a sequence is given by the formula  $2n + 1$ . Write down the first 3 terms of the sequence.
- The equation of a straight line is given by  $y = 2x + 1$ . Copy and complete the table of values:

$x$	1	2	3
$y$			

### Notes

#### **Sequence vs. straight line graphs**

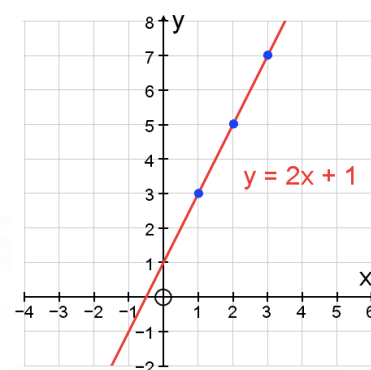
Sequence whose  $n$ -th term is  $2n + 1$  –  $n$  can take the values 1, 2, 3, 4, ... i.e.  $n$  must be a positive integer. For example, we cannot have the 2.5th term

However, an equation allows  $x$  to take any value, including negatives and decimals and so fills in the gaps between the points of a sequence.

The **blue points** are the values of the sequence where the  $n$ -th term is  $2n + 1$ .

The **red line** is the equation of the straight line  $y = 2x + 1$

Every point on the line  $y = 2x + 1$  satisfies that equation.



**Video:** [Drawing straight-line graphs using a table of values](#)

[Solutions to Starter and E.g.s](#)

### Exercise

p39 Ex 14.2 Qu 3-9 odd, 10

[Textbook answers \(only available during a lockdown\)](#)