Mathematics

Sequences
Generalising arithmetic sequences through tracking calculations

Downloadable Resource

Ms Jones

Try This

Imagine the number grid continues for many rows.

Write down a number to match each description:

- A number greater than 20 in column A
- A number greater than 20 in column C
- A number between 100 and 110 in column B

A	B	C	D
-6	-5	-4	-3
-2	-1	0	1
2	3	4	5
6	7	8	9

How many ways can you complete this sentence:

"Numbers in column **A / B / C / D** will **always / sometimes / never ......** "

Independent task

	A	B	C	D	E
Row 1	2	3	4	5	6
Row 2	7	8	9	10	11
Row 3	12	13	14	15	16
Row 4	17	18	19	20	21

1. Look at the number grid shown on the right. Write down the column and row that match each tracking calculation.

a) $5 \times 5 - 3$
b) $5 \times 20 - 1$
c) $5 \times 11 + 1$

2. Look at the same number grid as Q1. Write down a tracking calculation that matches each description

a) Column D, row 15
b) Column A, row 12
c) Column E, row 50

3. Look at the same number grid as Q1. Which columns and rows would these numbers fall into?
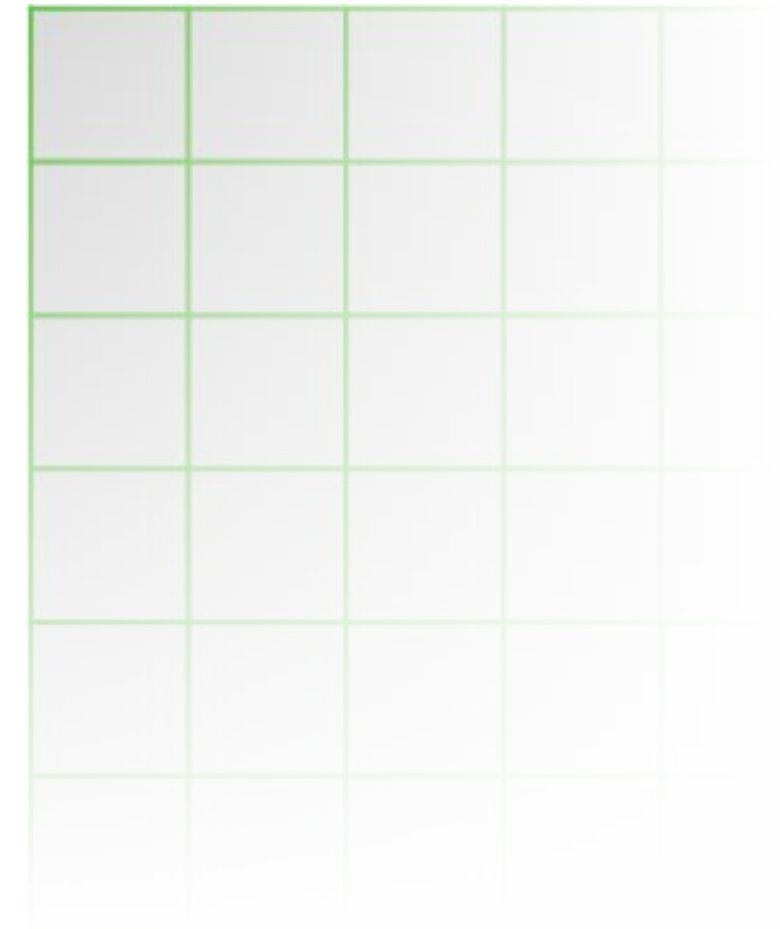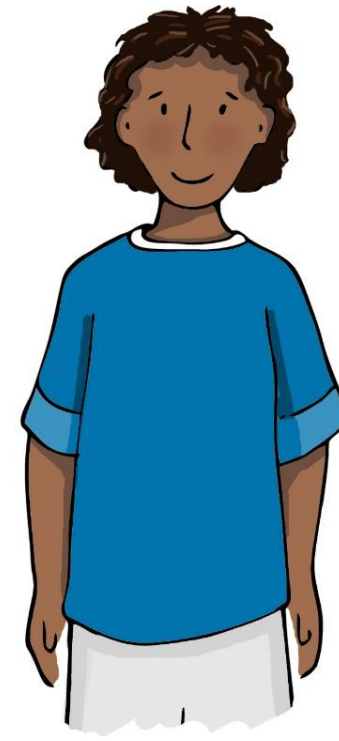
a) 123
b) 497
c) 1 000 006

Explore

Zaki is describing a number grid.

- The first row contains the number -3.
- Every column contains odd and even numbers.
- The 10th row contains the number 64.

What could his grid look like? Draw the first two rows.

How many different grids could he be describing?