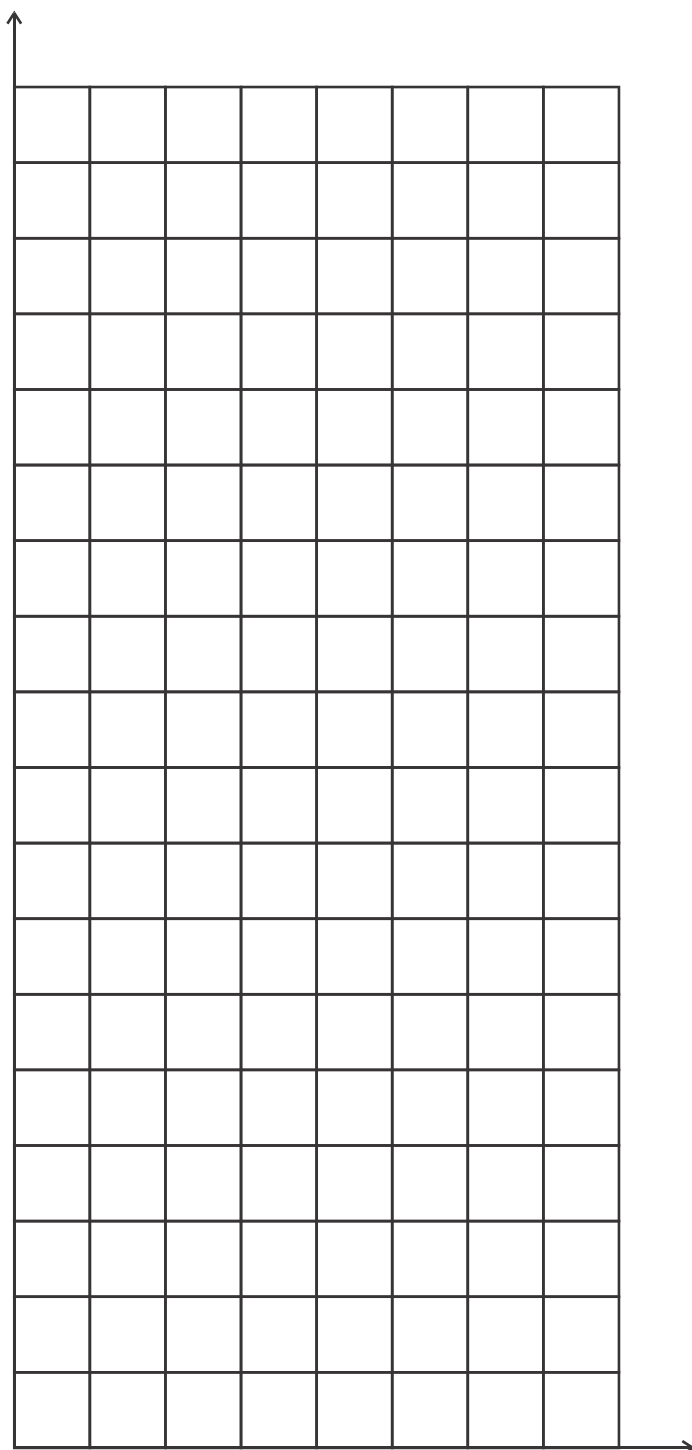


# Garden Beds

# Investigation Guide

There are two sets of numbers in this problem.

The plant numbers and the tile numbers.



When mathematicians find two sets of numbers together, they make them into pairs:

(1, 8) (2, 10), (3, 12), (4, 14), (5, 16), (6, 18)

The numbers in each of these pair are in an order.

- First is the plant number.
- Second is the tile number.

When the order matters in a pair of numbers they are called Ordered Pairs.

- What would be the ordered pair for a garden that had 10 plants?

Ordered pairs can be shown as points (dots) on a graph.

So that everyone knows the order, the first number is along the bottom of the graph and the second number is up the left side.

- Write the ordered pair for 36 tiles?  
.....

You are going to make a graph of these ordered pairs. You can ask for help.

**Firstly** predict what you think the graph might look like if the dots were joined. Sketch your prediction in your journal.

Now plot the points on this grid.

Join the dots.

When you join the dots you are assuming that there are garden bed sizes between the dots you plotted.

Use your *graph* to work out the ordered pairs for 7, 8, 9, 11, 12, 13, 14.

Does the graph give the answers you expect.

Use a Garden Beds rule to calculate the number of tiles for  $9\frac{1}{2}$  plants. Check with the graph.

Explain in your journal how ( $9\frac{1}{2}$ , ...) plants might make sense.