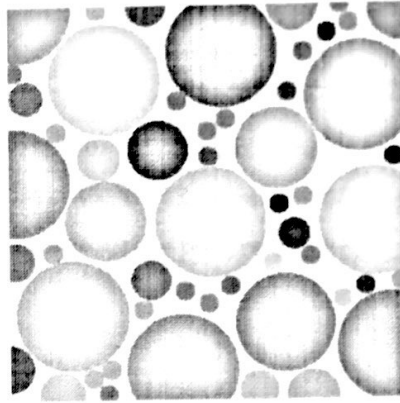
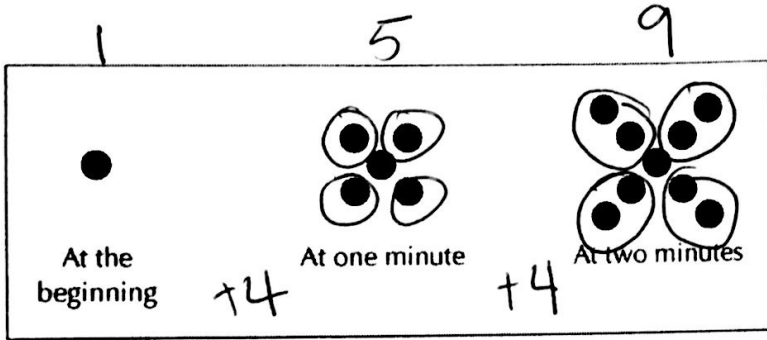


1.2 Growing Dots

A Develop Understanding Task



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<https://flic.kr/p/d9M2T>



0	1
1	5
2	9
3	13

1. Describe the pattern that you see in the sequence of figures above.

add 4

The number of dots in each arm and leg is the same as the number of minutes

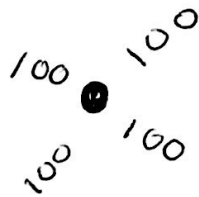
2. Assuming the pattern continues in the same way, how many dots are there at 3 minutes?



13 dots

1, 5, 9, 13
+4

3. How many dots are there at 100 minutes?



$$4(100) + 1 = 401$$

dot in the middle



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4. How many dots are there at t minutes? Solve the problems by your preferred method. Your solution should indicate how many dots will be in the pattern at 3 minutes, 100 minutes, and t minutes. Be sure to show how your solution relates to the picture and how you arrived at your solution.

$$4(3) + 1 = 12 + 1 = 13$$

$$4(100) + 1 = 400 + 1 = 401$$

$$4(t) + 1 = \text{Number of dots}$$

↑

number
of minutes

* Arithmetic sequence
is a sequence that is
increasing by the same
number every time

1, 5, 9, 13

add 4 every time

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Recursive formula:

Always uses the previous term
to define the next term of the
sequence

This lesson:

$$\text{Next} = \text{Previous} + 4$$

explicit equation in the
lesson: $4t + 1$



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