Have signed grade report out on desk for me to pick up

See if you can fill in the following patterns and answer the questions

1) 4, 8, 12, 16, 20 ...

+4

2) -10, -20, -30, -40 ...

-10

3) 5, 2.5, 0, -2.5, -5...

-2.5

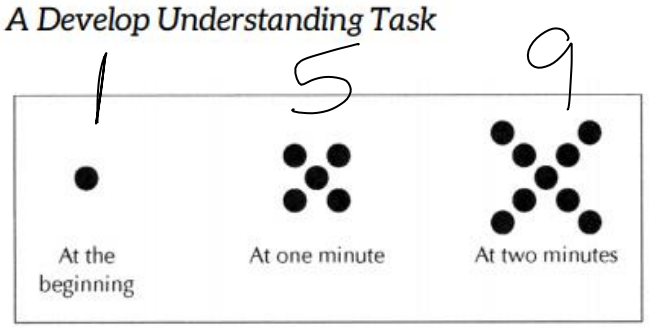
4) 14, 21, 28, 35, 42

+7

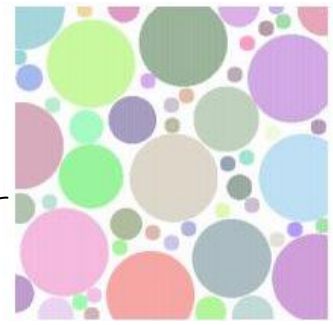
Module 1.1 **Arithmetic Sequences Notes** **Name:**

Growing Dots

A Develop Understanding Task



+4



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

+4 dots every min

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

13 dots

3. How many dots are there at 100 minutes?

4(100)+1 +4 every min

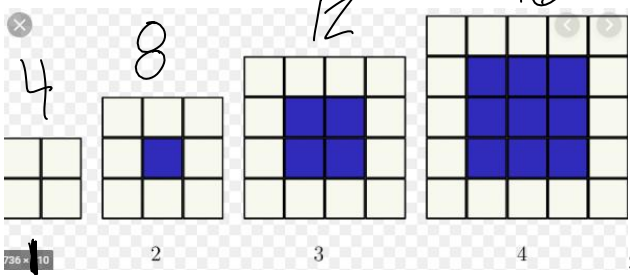
4. How many dots are there at t minutes? Solve the problems by your preferred method. Your solution should indicate how many dots will be in the pattern at 3 minutes, 100 minutes, and t minutes. Be sure to show how your solution relates to the picture and how you arrived at your solution.

4n+1 +4 dots every min

+1 → 1 dot to start with

mins	Dots
0	1
1	5
2	9
3	13
4	17

you start with 1 dot



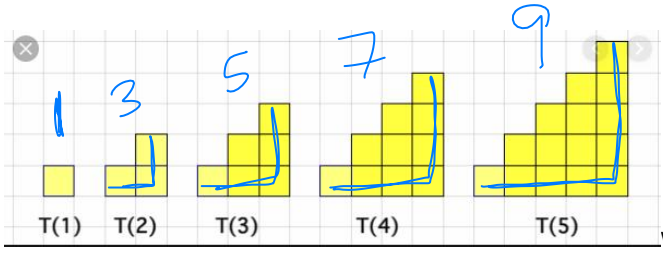
+4

See if you can find the pattern for the lighter boxes.

4n

How many light boxes would the border have around it for the 55th image?

4(55) = 220



-1

0

+2

What is the pattern for this? Equation(s)?

2x - 1

If you were building a staircase to Heaven, what would the 210th set of stairs look like?

2(210) - 1 = 420 - 1 = 419 stairs