Talk with your group about this and come up with a rule or equation. I will get you your poster soon.

Staircase Towers $2n + 1 = C$
$2(n-1) + 3$

Linear
continuous

Below is a staircase tower that is made by starting with 3 cubes and adding two cubes to get each successive tower.
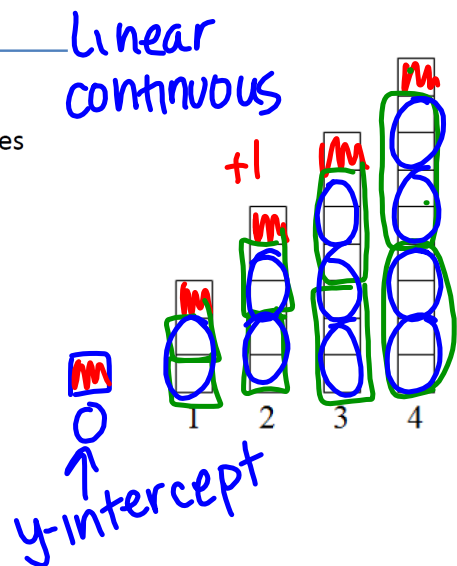
$m = slope$

$+1$

How many cubes will be in the 10th tower?

21

How many cubes will be in the nth tower?
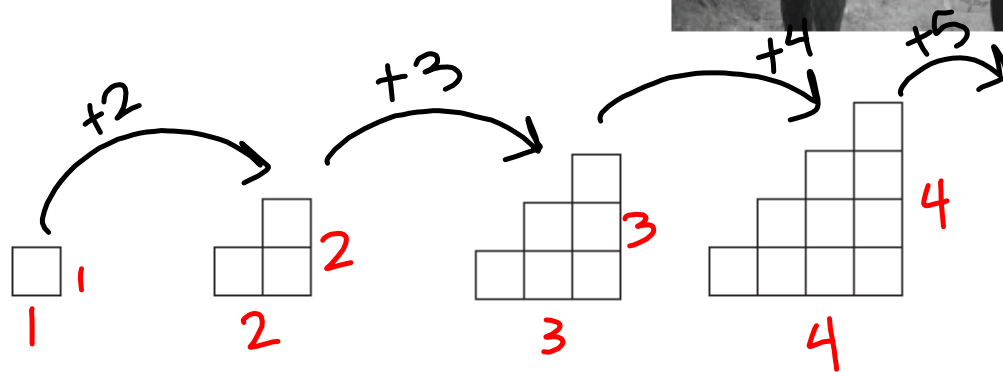
$C = 2n + 1$

How do you know?

y-intercept

*Make a poster of your groups answers and thinking. Link the diagram to your rule or formula to determine the number of cubes in the nth tower. Be ready to explain your group's thinking to the class!

Aug 23-1:30 PM

1.1 Something to Talk About
A Develop Understanding Task

Cell phones often indicate the strength of the phone's signal with a series of bars. The logo below shows how this might look for various levels of service.
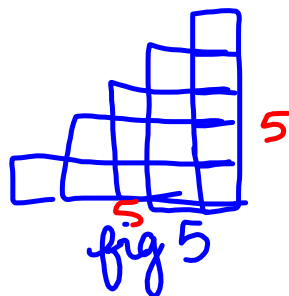
+2   +3   +4   +5

1   2   3   4

1   2   3   4

X ⟶   Figure 1   Figure 2   Figure 3   Figure 4   fig 5

#of blocks in any figure = previous figure + X ← figure #

1. Assuming the pattern continues, draw the next figure in the sequence.

15 blocks

5
5
fig 5

2. How many blocks will be in the size 10 logo?

3. Examine the sequence of figures and find a rule or formula for the number of tiles in any figure number.

$f(1) = 1$

recursive formula : $f(x) = f(x-1) + x$

$$f^x = f^{(x-1)} + f^{(x-2)}$$

$f(3) = f(3-1) + 3$

$f(3) = f(2) + 3$

$f(3) = 3 + 3$

$f(3) = 6$

$(3, 6)$

Homework/Classwork

Finish 1.1