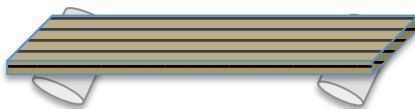


General rules?

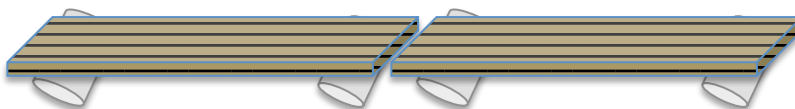
Building a boardwalk

I'm building a boardwalk with sections of boards and support tubes. I'll be making 8-foot long sections out of 1 x 4 inch boards and securing them to large-diameter sections of plastic pipe.

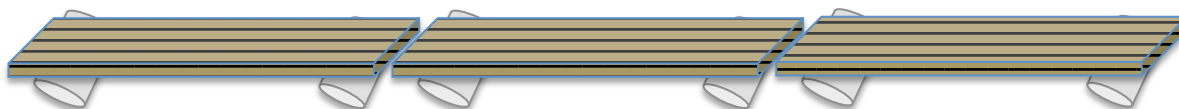
One section would look like this:



Two sections would look like this:



Three sections would look like this:



And so on ...

I've made this table to help me figure out how many boards and support tubes I will need to buy and how long my boardwalk will turn out to be.

1. See if you can fill in all of my missing calculations.

Section #	7-board planks (8 foot each)	Support tubes	# of 8 foot boards that I'll need to buy	Length of boardwalk
1	1	2	7	$1 * 8 \text{ feet} = 8 \text{ feet}$
2	2	4	14	$2 * 8 \text{ feet} = 16 \text{ feet}$
3	3	6	21	
4	4	8	28	

10				
N				

2. To get from the parking lot to the field that is located on the other side of the swampy area, I'll need 200 feet of boardwalk. How many sections will I have to use to make a walk that spans the swamp?
3. Did you need to find constant differences to figure out this pattern?
4. What clues helped in creating the general form of the pattern and its lengths?