




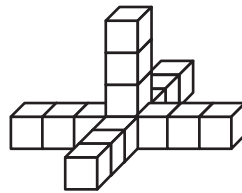


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1 Here are the first 3 arrangements in the Short Towers cube sequence you worked with in class. Explain to an adult at home how the towers change from one arrangement to the next, and have the adult initial the sheet to show he or she understands.

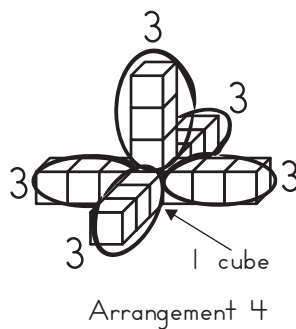
 Arrangement 1	 Arrangement 2	 Arrangement 3	Initials
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2 a Here is the 4th arrangement in the sequence. How many cubes are in this arrangement?



b Shanda says you don't have to count the cubes one by one to find out how many are in the 4th arrangement. She says there is 1 cube in the middle and then 5 arms of 3 cubes each.

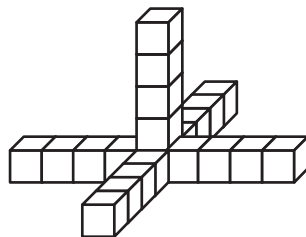
Write an equation to show how Shanda figured out the number of cubes in the 4th arrangement.



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- 3** How many cubes are in the 5th arrangement? Use Shanda's method or come up with one of your own to figure it out without counting one by one. Label the picture of arrangement 5 and write an equation to show your thinking.



Arrangement 5

- 4** How many cubes would it take to build the 23rd arrangement in this sequence? Show your thinking using numbers, words, or labeled sketches.
- 5** **CHALLENGE** A certain arrangement in this sequence takes 631 cubes to build. Which arrangement is it? Show your thinking using numbers, words, or labeled sketches.