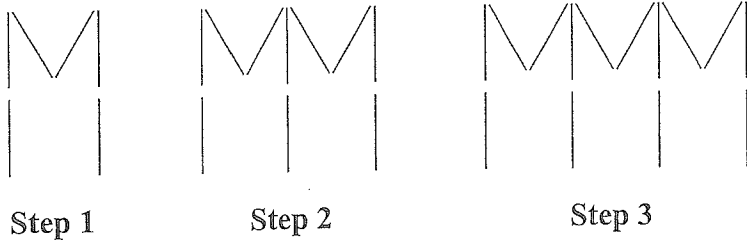


2.3 Letter M Pattern

Here is a pattern for making sequences of the letter **M** from toothpicks. For example, Step 1 is made from 6 toothpicks.



1. Make Step 4 by building it with toothpicks or by drawing it above.
How many toothpicks are in Step 4?
2. If the pattern continues, how many toothpicks would you need to build Step 7?
Show or explain how you figured that out.
3. Cody wants to find out how many toothpicks are needed for Step 30 and for Step 100, but he doesn't want to draw all the steps.
 - a) What rule could he use to figure out how many toothpicks he needs for *any* Step number?
 - b) How does the rule work?
4. Nora used this pattern to make a sequence of **M**'s that took 98 toothpicks.
What is the Step number? Show or explain how you figured this out.