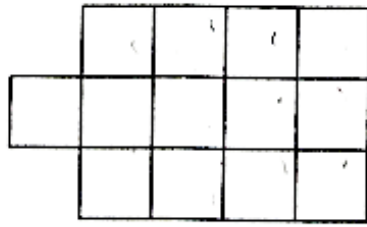
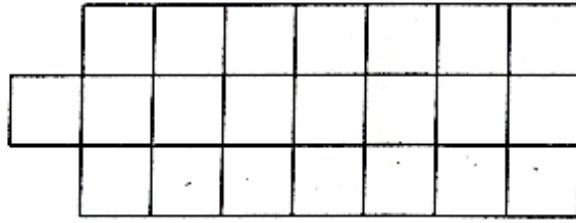


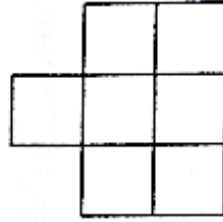
Increasing Pattern #3



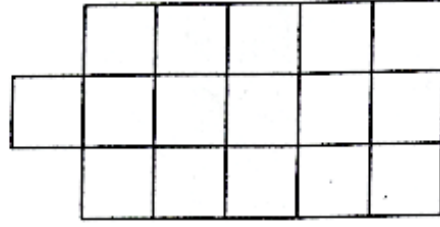
3



6



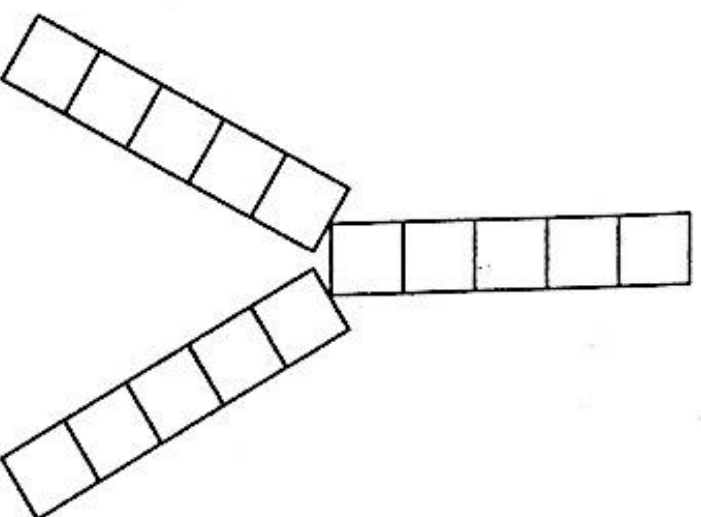
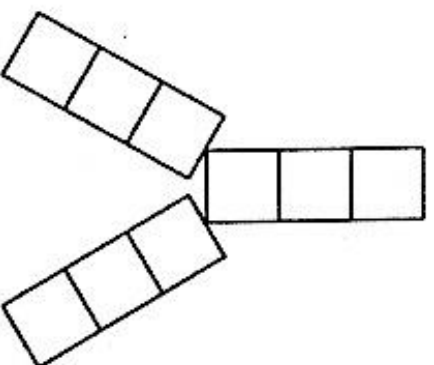
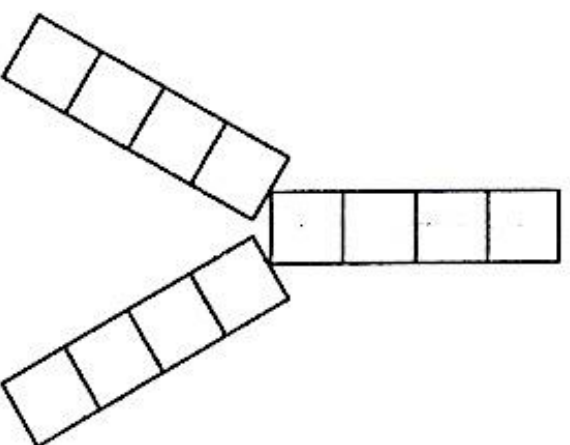
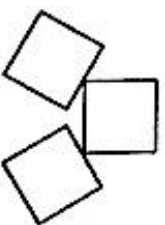
1



4

**How many tiles would it take to build the 100th structure?
the 1000th structure? any number structure?**

Increasing Pattern #1



4

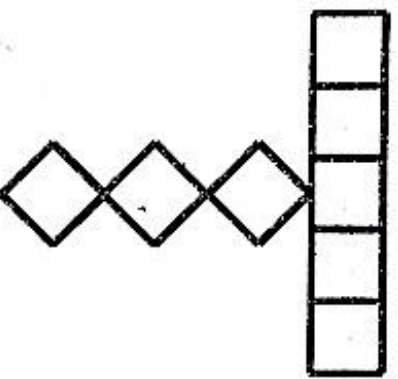
1

3

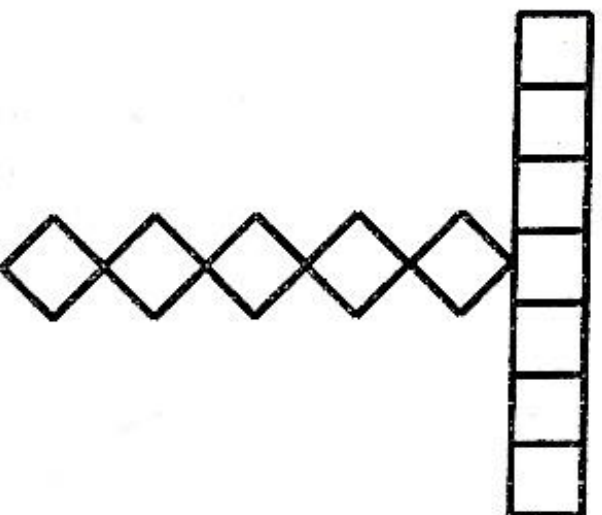
5

**How many tiles would it take to build the 100th figure?
the 1000th figure? any number figure?**

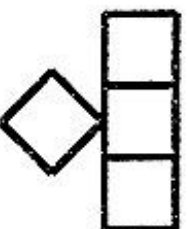
Increasing Pattern #2



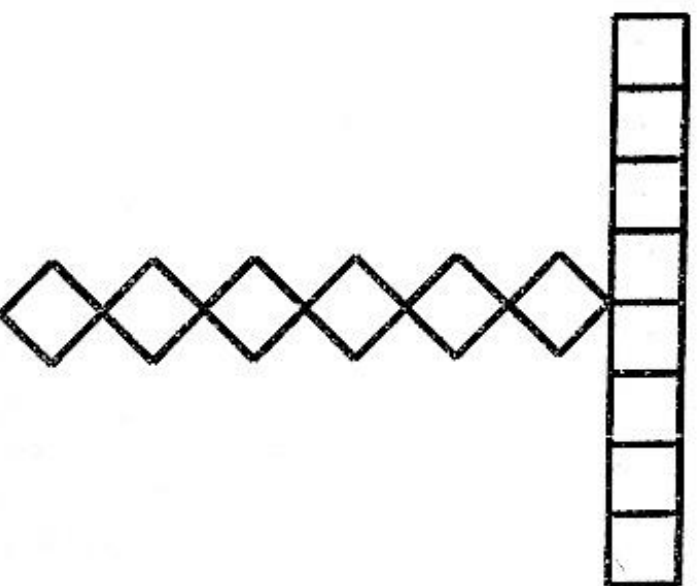
3



5



1



6

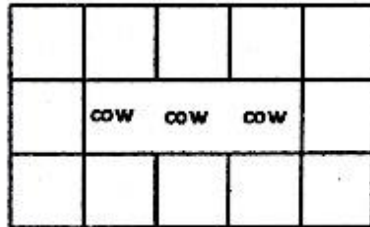
How many tiles would it take to build the 100th figure?
the 1000th figure? any number figure?

Cow Pens

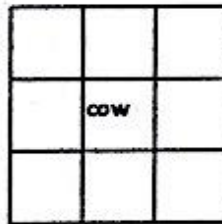
The High Mountain Fencing Company is in the business of building cow pens. The company ships cow pens to all parts of the United States.

To cut cost they have found a way to build pens using fence sections.

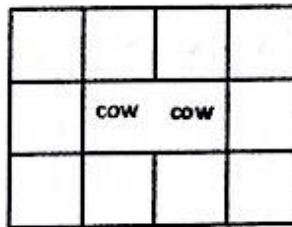
A cow pen for three cows looks like this:



A cow pen for one cow looks like this:



And a cow pen for two cows looks like this:

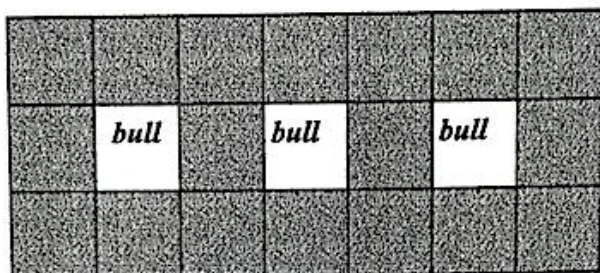


How many sections of fence would it take to hold 100 cows?
1000 cows? any number of cows?

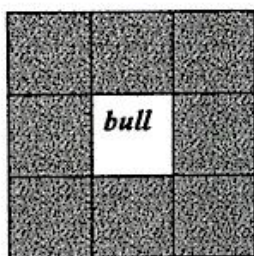
Bull Pens

The High Mountain Fencing Company is in the business of building bull pens. To cut costs, they have found a way to build pens using a standardized fencing section.

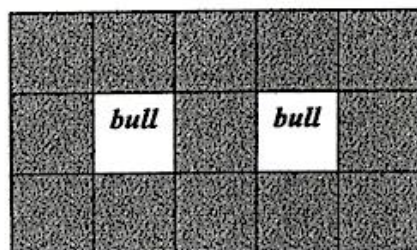
A pen for three bulls looks like this (where each shaded box represents a fence section):



A pen for one bull looks like this:



A pen for two bulls looks like this:



How many sections of fence would it take to hold six bulls? ten bulls?
any number of bulls?

How many bulls can you hold using exactly 28 sections of fence? Exactly
118 sections of fence?

What is the maximum number of bulls you can hold using 80 sections of
fence?