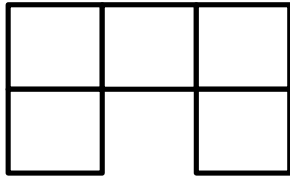


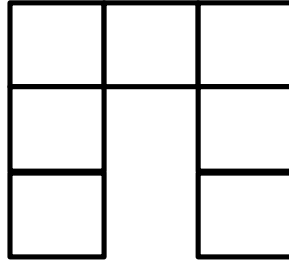
The Arch Problem

Look carefully at the figures below.

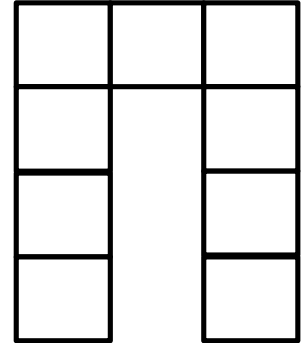
First Figure



Second Figure



Third Figure



1. Sketch the next two figures.

2. Complete the table below.

Figure Number	Number of Squares
1	
2	
3	
4	
5	

3. In a few sentences, describe what the tenth figure would look like.

4. Explain the steps you would take to figure out the number of squares in the 99th figure.

5. In a few sentences, write a way to describe how you could figure out how many squares there are at any stage in the pattern.

6. Which figure will have 175 squares in it?