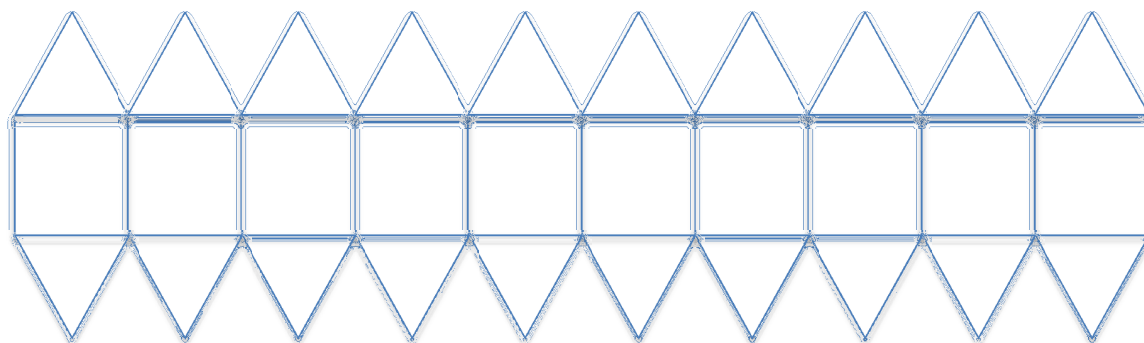


## Math 8 – Try This!

### 9.2 Patterns in a Table of Values



1. What are the 3 patterns you see in the design above?

rows of  $\triangle$   
rows of  $\square$




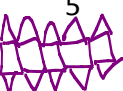
2. How many squares and triangles are in this design?

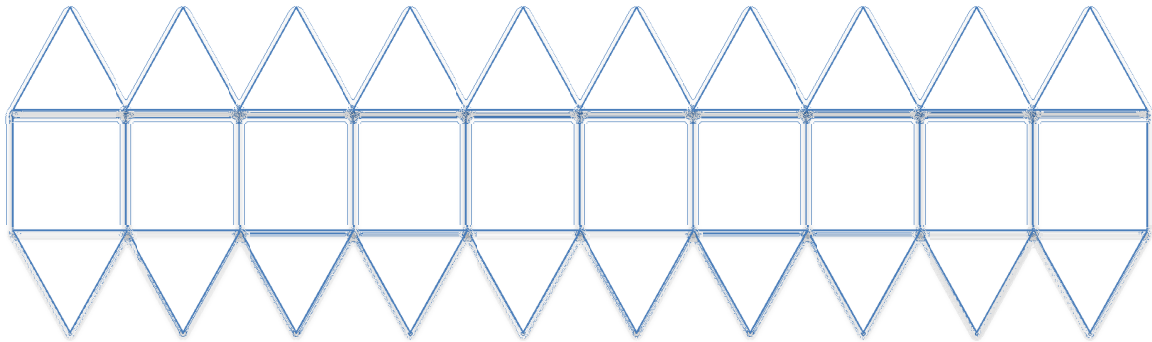
10  $\square$   
20  $\triangle$

3. If this design has ten sections, what does one section of the design look like?



4. Fill in the table of values:

Number of sections	Number of vertical segments	Number of horizontal segments	Number of slanting segments
 1	2	2	4
 2	3	4	8
 3	4	6	12
 5	6	10	20



5. a) Describe the relationship between the number of sections and the number of vertical segments.

Each segment has one more vertical line than the number of segments

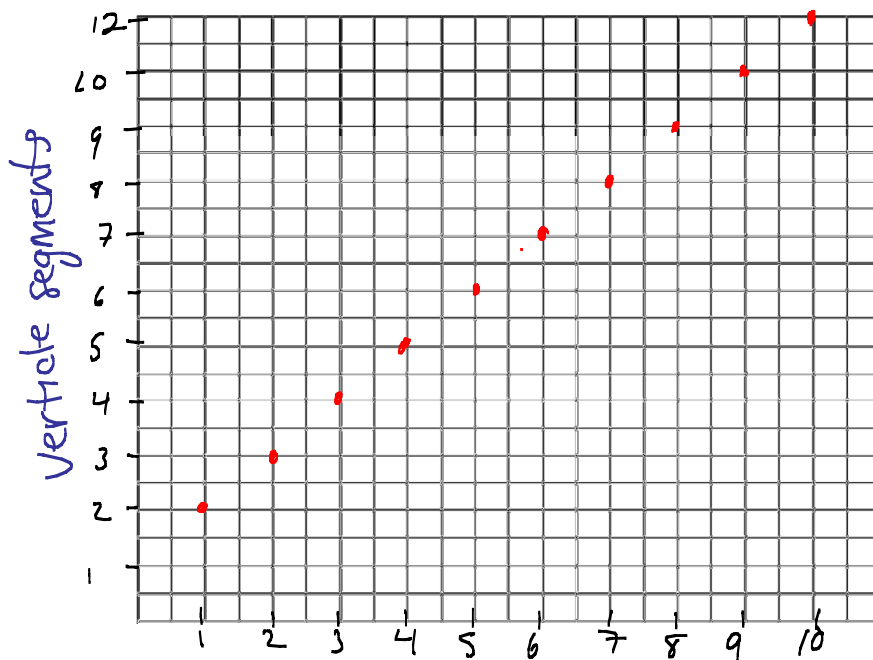
b) Choose variables to represent the number of sections and the number of vertical segments.

$N$  = number of sections  
 $V$  = vertical segments

c) What is an expression for the number of sections in term of the vertical segments?

$$V - 1$$

c) Draw a graph to show the relationship between the number of sections and the number of vertical segments.



The relationship between vertical lines and number of segments

number of sections