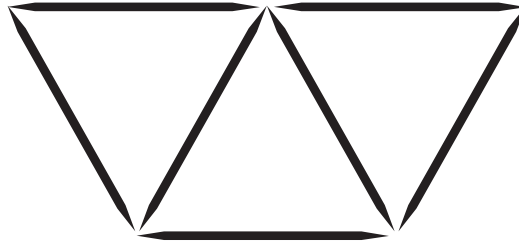


MathFLIX CHALLENGE

Creative a Table to Discover a Rule: *Instructional*

In the picture below, the toothpicks form triangles. Explain a rule you can use to find the total number of toothpicks needed to make any given number of triangles.



1. What do you see? (3 triangles, 7 line segments)
2. Can you predict the question?
3. Read the problem.
4. How many toothpicks do you need for the first triangle? How many are added to make the second triangle?
How many are added to make the third triangle?
5. Predict how many you would need for 4 triangles, 5 triangles and 6 triangles.
6. What rule did you use to make the prediction?
7. Complete this table for 6 triangles:

# of Triangles (n)	# of Toothpicks
1	
2	
3	
4	
5	
6	

8. Choose which rule you can use to find the total number of toothpicks needed to make any given number of triangles: ($2n$ $2n + 1$ $2n - 1$)

First, I studied the diagram **because** _____
Second, I read the problem **because** _____
Next, I decided to make a table **because** _____
Then, I tried several rules beginning with $2n$ **because** _____
My answer is _____ **because** _____