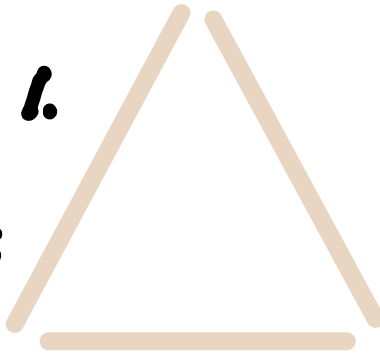


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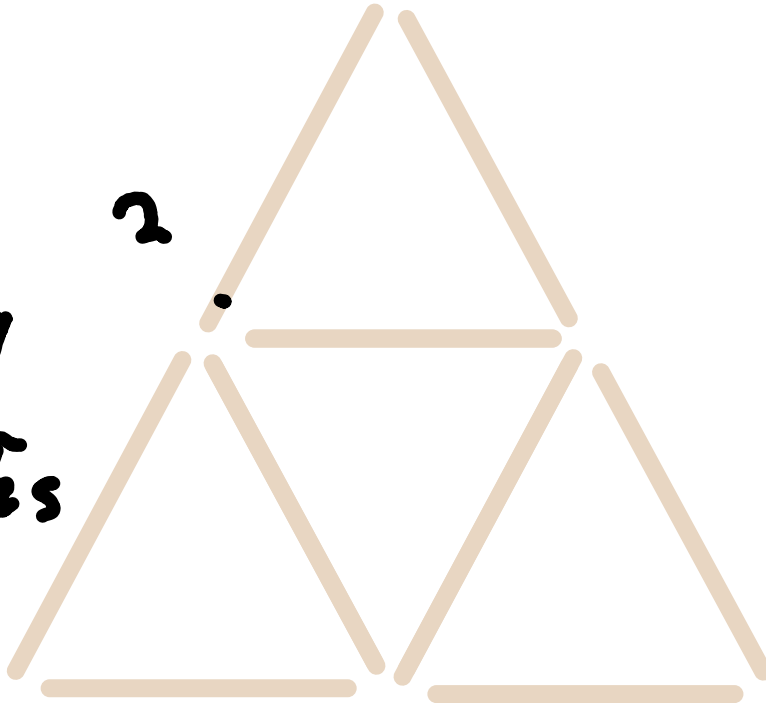
Cassie Liu

NRich-Sticky Triangles

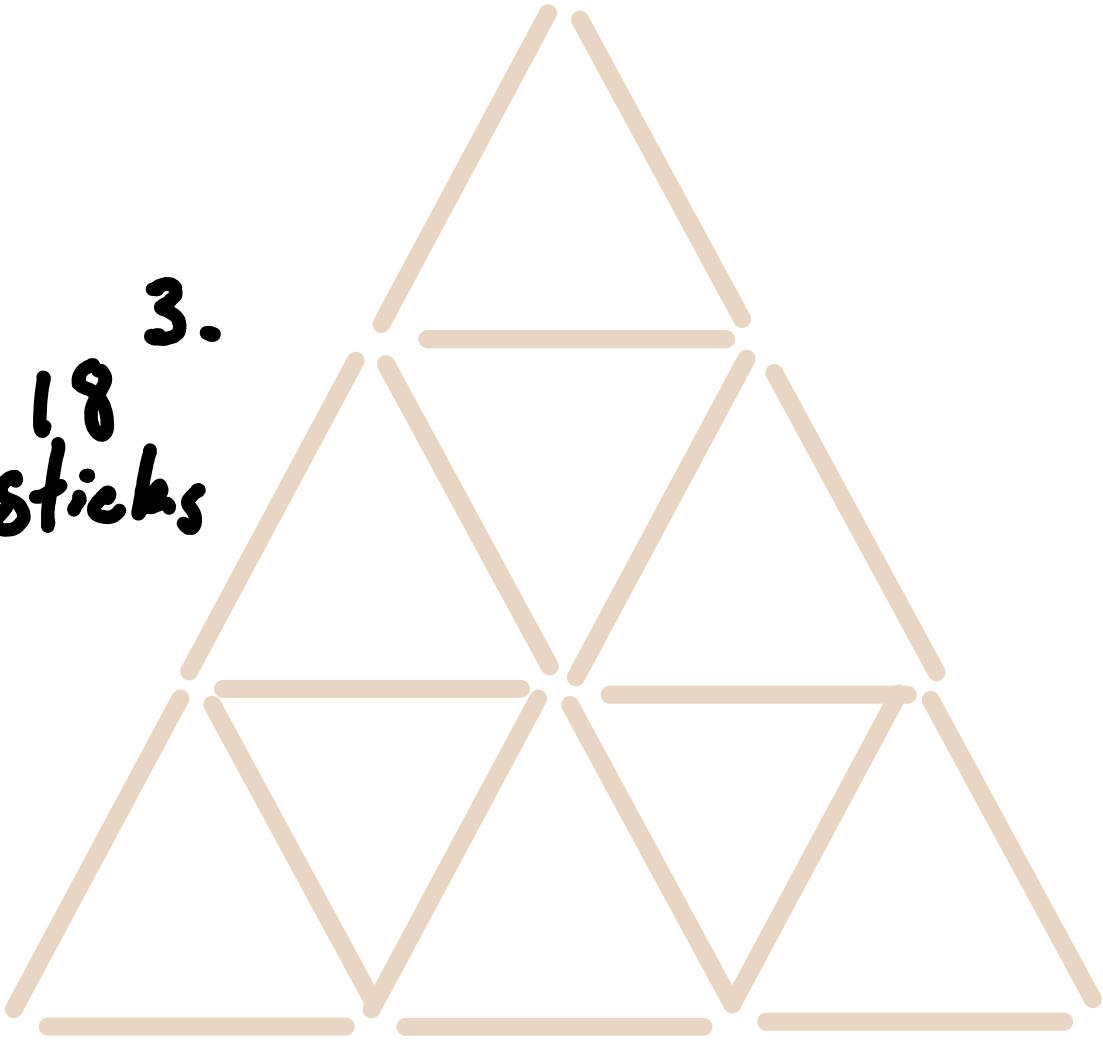
3
Sticks



9
Sticks



3.
18
sticks



4.
30



Sticks



Answers

A. $3, 9, 18, 30$
 $\begin{matrix} +6 & +9 & 12 \\ +3 & +3 & \end{matrix}$

The triangles

$1, 4, 9, 16$
 $\begin{matrix} +3 & +5 & 7 \\ +2 & +2 & \end{matrix}$

$N = \text{layers / row number}$

Stick(s)
 $(3) 9, 16, 30$
 $N=1 \quad N=2 \quad N=3 \quad N=4$

Pattern: $N \times 3 + \text{previous Number}$

B. I predict that the sticks and triangle's pattern will go on.

C. The pattern occurs

D. It will go on forever because a pattern is known for repeating on and on forever.

Working Out.

A) Pattern NO. 1 | $3, 9, 18, 30$
the sticks
+6 +9 12
+3 +3

Pattern No. 2