






Toothpick Patterns

Design Number	Toothpick Pattern	# Toothpicks	# Squares
1		4	1
2		7	2
3		10	3
4		13	4
5		16	5

1. Draw designs #4 and #5. How many toothpicks would you need to create the *fourth* and *fifth* design?

#4: 13
#5: 16

2. Complete the table for each design.

see above

3. Do you see any patterns? If so, describe them.

Students are most likely to notice that each design has 3 more toothpicks than the previous one.

Ask:

- Do you think it will always be three more, no matter how big the pattern gets?
- With this particular toothpick design, why do we end up adding three more each time we add a square?