

The background of the slide is a highly detailed, black and white woodcut-style illustration. It depicts a chaotic and crowded scene with numerous figures, including men, women, and animals (possibly dogs or pigs), engaged in various activities. The style is reminiscent of 19th-century social commentary prints, showing a dense, almost overwhelming mass of people and animals. The figures are rendered with fine lines and cross-hatching for shading, creating a sense of movement and complexity. The overall composition is very busy, with many small, individual scenes packed together.

Picture sequences

Look at these patterns made of match sticks



1st pattern
N=1

2nd pattern
N=2

3rd pattern
N=3

4th pattern
N=4

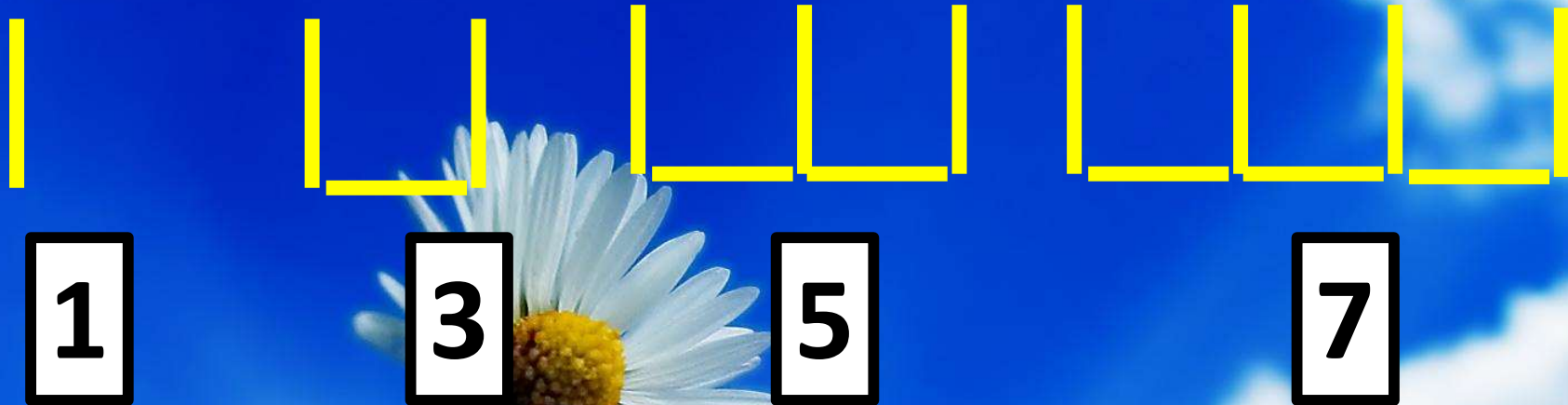
Draw the next pattern, then click to see if you were right



How many sticks do we need for the 20th pattern?

To save time we need the
nth term

How many sticks for pattern 20?

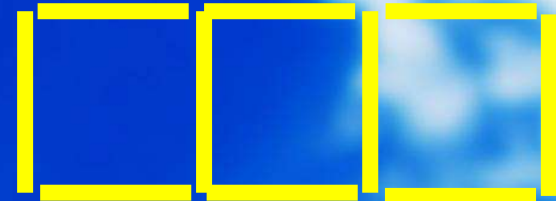
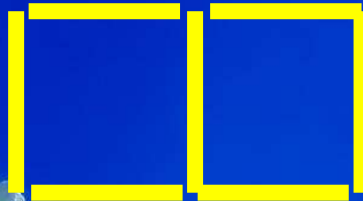


$$\text{Nth term} = 2n - 1$$

To find the 20th term, replace n with 20

$$\begin{aligned} 20^{\text{th}} \text{ term} &= 2 \times 20 - 1 \\ &= 39 \end{aligned}$$

Look at these patterns made of match sticks



1st pattern
N=1

2nd pattern
N=2

3rd pattern
N=3

4th pattern
N=4

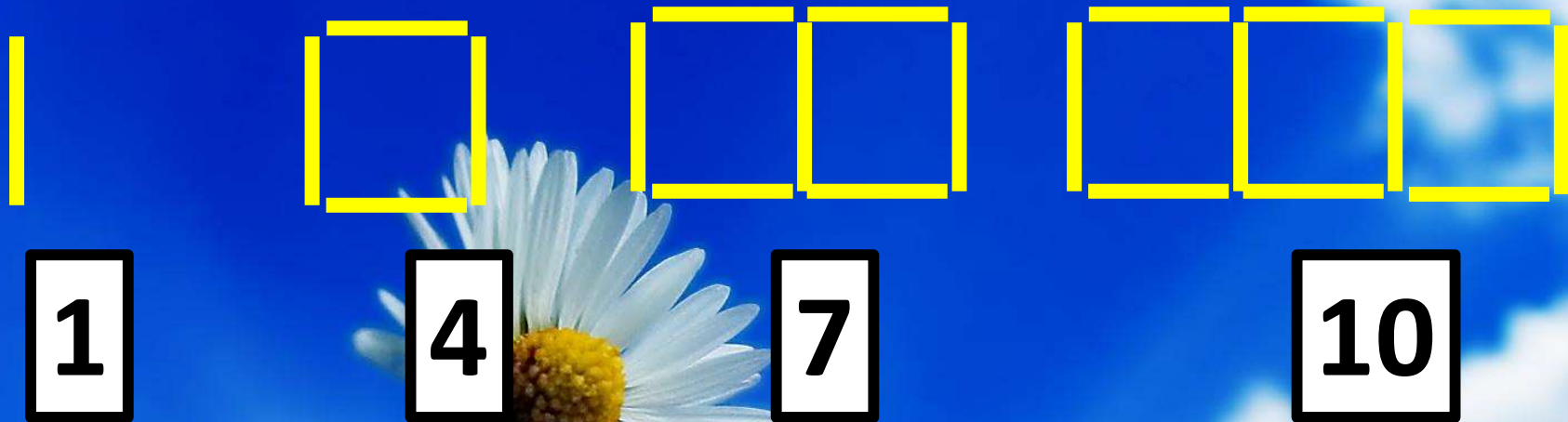
Draw the next pattern, then click to see if you were right



How many sticks do we need for the 30th pattern?

To save time we need the
nth term

How many sticks for pattern 30?



$$\text{Nth term} = 3n - 2$$

To find the 30th term, replace n with 30

$$\begin{aligned} 30^{\text{th}} \text{ term} &= 3 \times 30 - 2 \\ &= 88 \end{aligned}$$

Look at these patterns made of squares



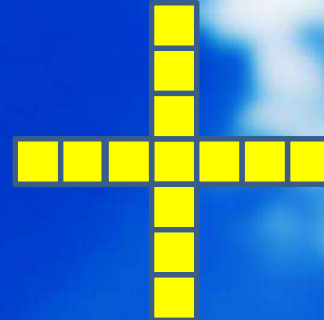
1st pattern
N=1



2nd pattern
N=2

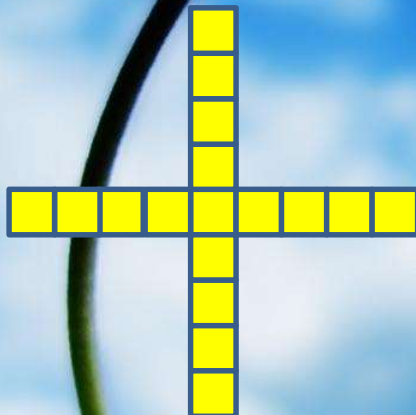


3rd pattern
N=3



4th pattern
N=4

Draw the next pattern, then click to see if you were right



How many sticks do we need for the 100th pattern?

To save time we need the
nth term

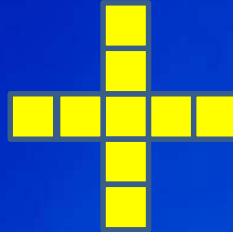
How many squares for pattern 30?



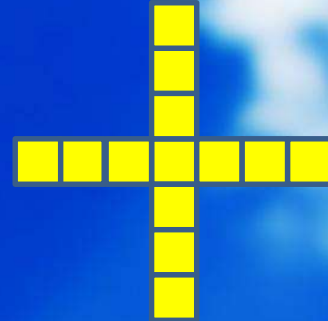
1



5



9



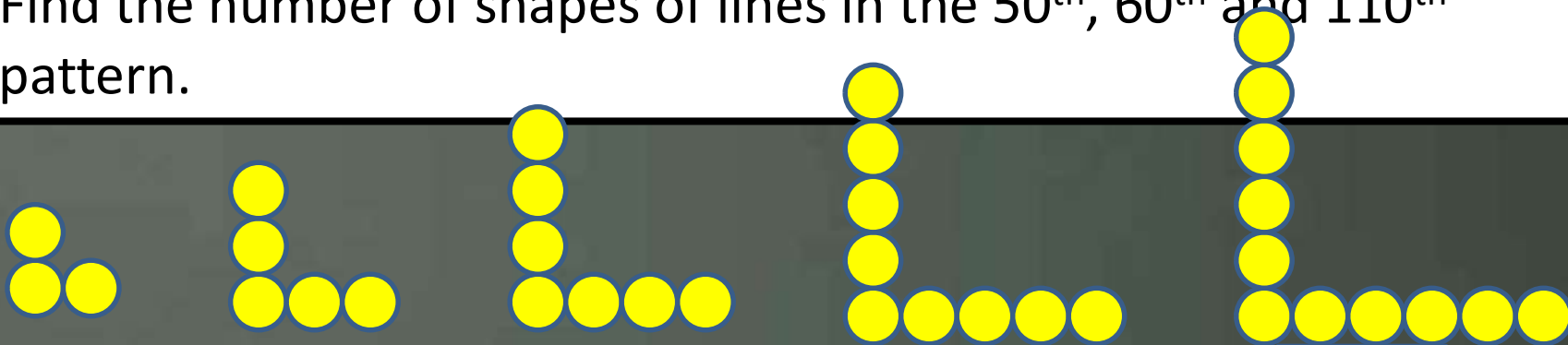
13

$$\text{Nth term} = 4n - 3$$

To find the 30th term, replace n with 100

$$\begin{aligned} 100^{\text{th}} \text{ term} &= 4 \times 100 - 3 \\ &= 397 \end{aligned}$$

1. Draw the next two patterns in each sequence.
2. Find the n th term of each sequence
3. Find the number of shapes or lines in the 50^{th} , 60^{th} and 110^{th} pattern.



Answers:

Nth terms:

$2n+1$, $3n+1$, $2n$, $4n$

50th pattern:

101, 151, 100, 200

60th pattern:

121, 181, 120, 120, 240

100th pattern:

201, 301, 200, 400

stions

