

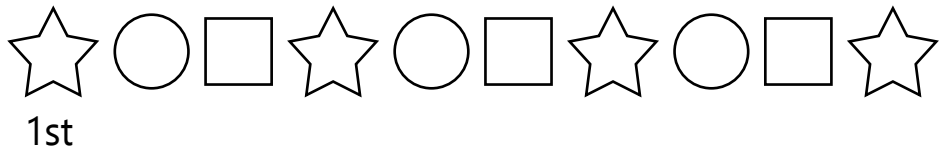
Example 7B

Solve the following problem. Show your working clearly.

Jacob constructs a pattern using different shapes as shown below.

The pattern continues.

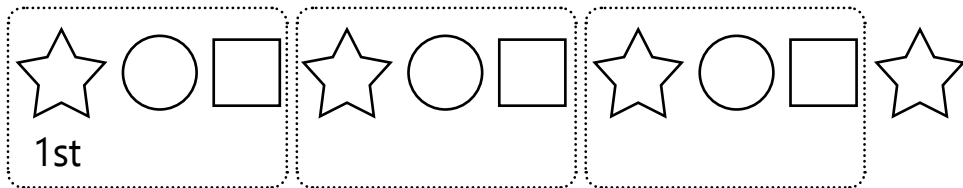
Which is the 50th shape in the sequence?



Solution


We look for the pattern of remainders and then **simplify the problem** using that approach.


A set of 3 shapes repeats.



$$50 \div 3 = 16 \text{ R } 2$$

50th shape \rightarrow 2nd shape in each set

2nd shape in the set: 

The 50th shape in the sequence is .