

Mathematics

# Sequences

## Dot chain sequences

## Downloadable Resource

Ms Jones

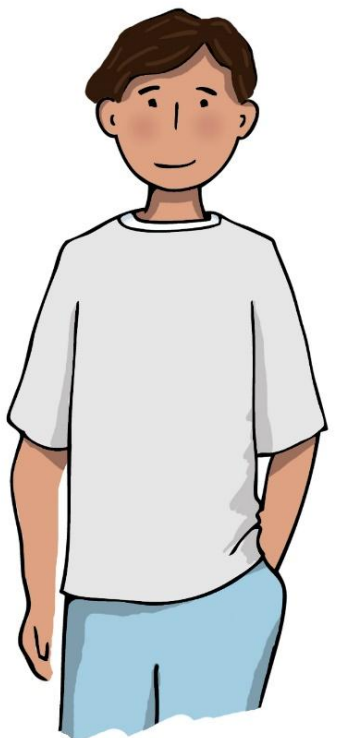
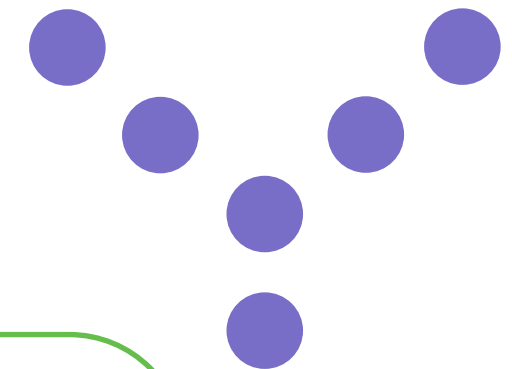
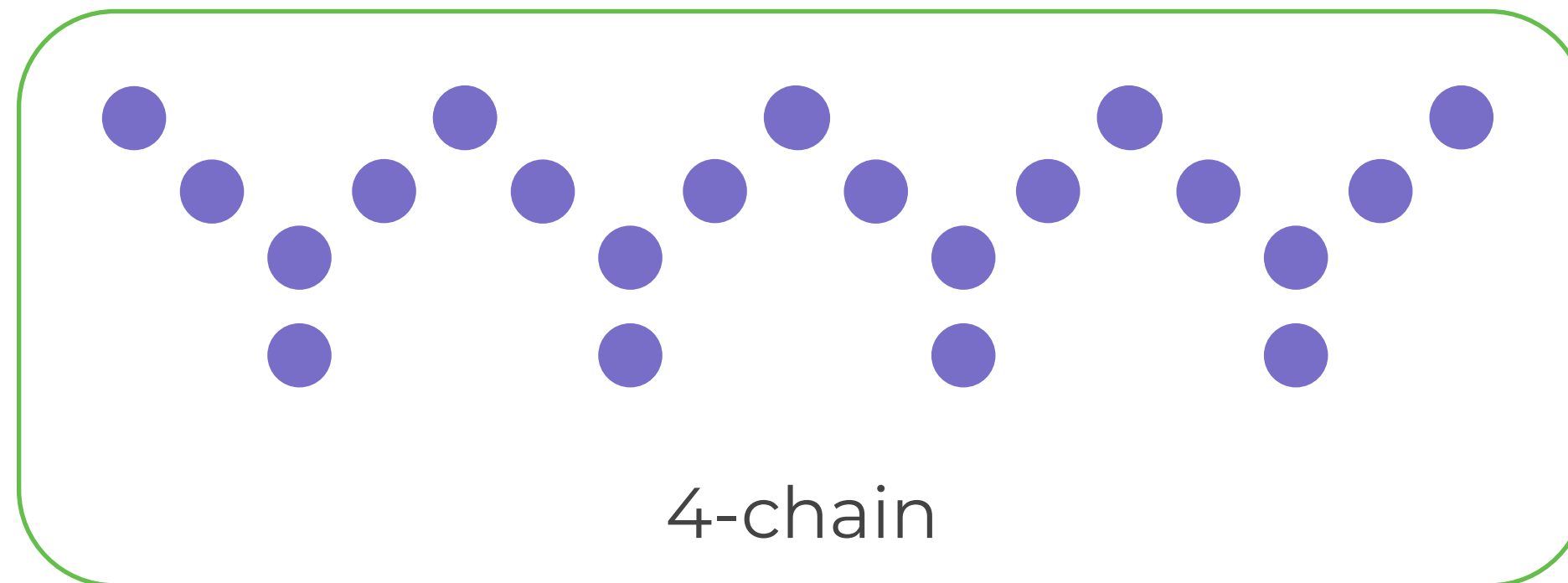
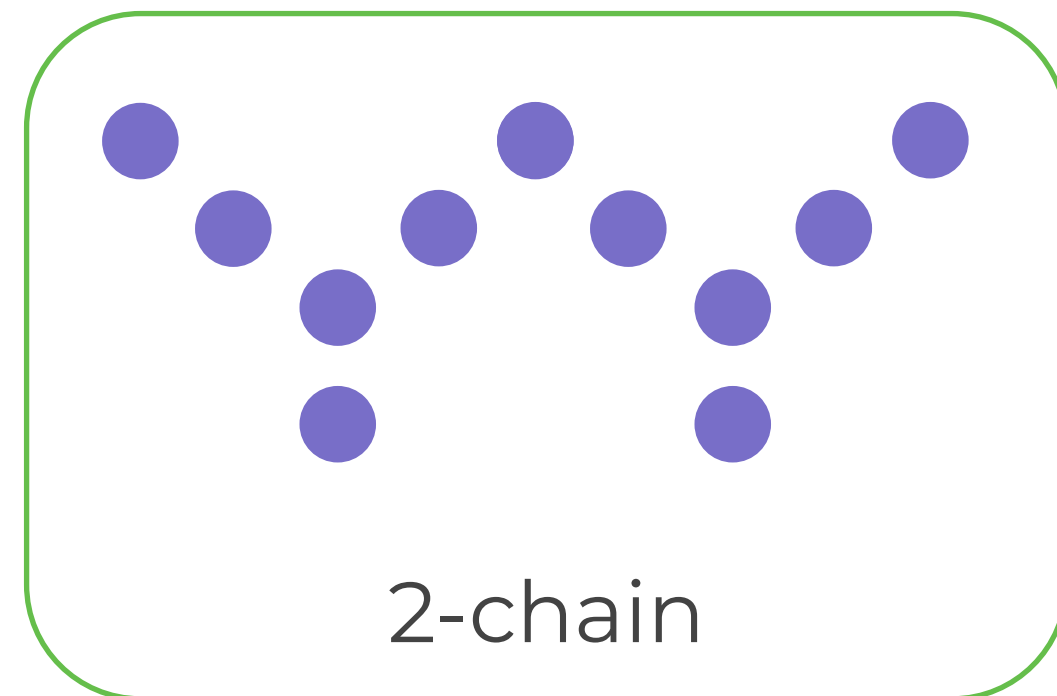


# Try This

Antoni has used this arrangement of dots to form chains.

Count the dots in the 2-chain.

Count the dots in the 4-chain. Is that what you expected?



Can you predict how many dots there are in a 5- or 10-chain?



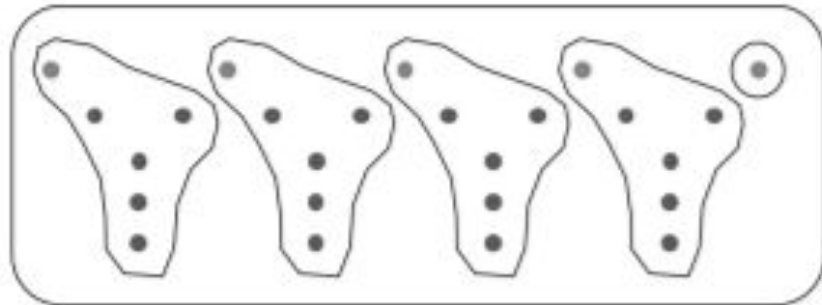
# Independent task



1. Chains can be made using the following pattern:

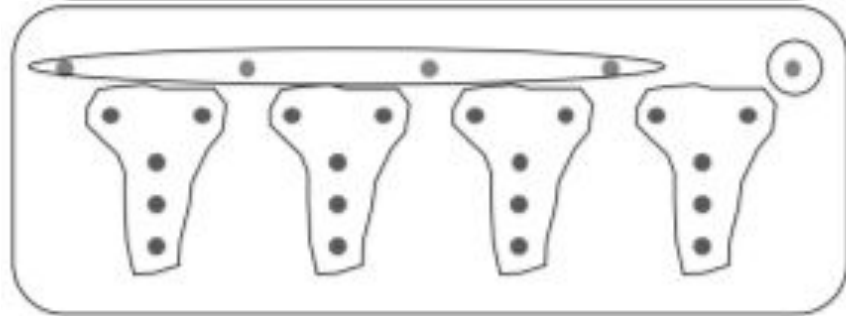
Match each grouping strategy for this 4-chain to the tracking calculation:

a)



i)  $4 \times 5 + 4 + 1$

b)



ii)  $4 \times 6 + 1$

2. Using both of the grouping strategies in question 1 to write an expression for the number of dots in a:

a) 5- chain

b) 20- chain

c) n- chain

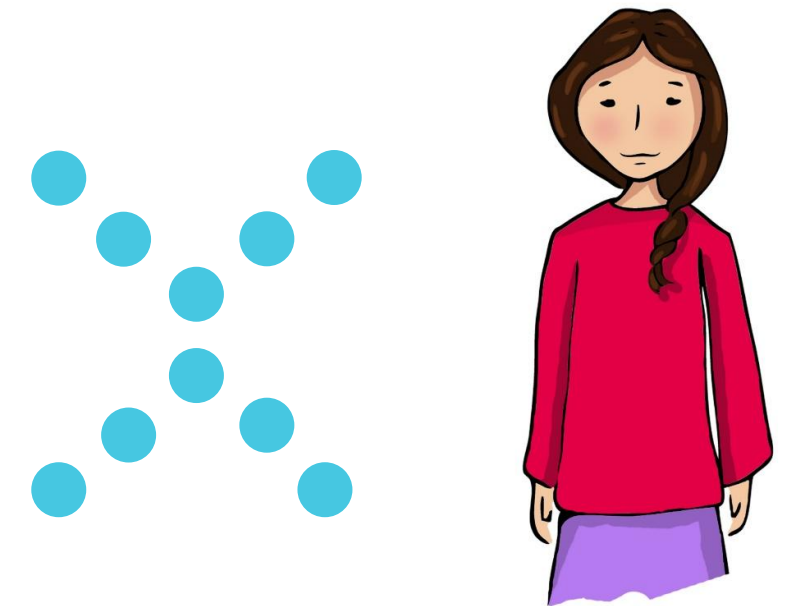
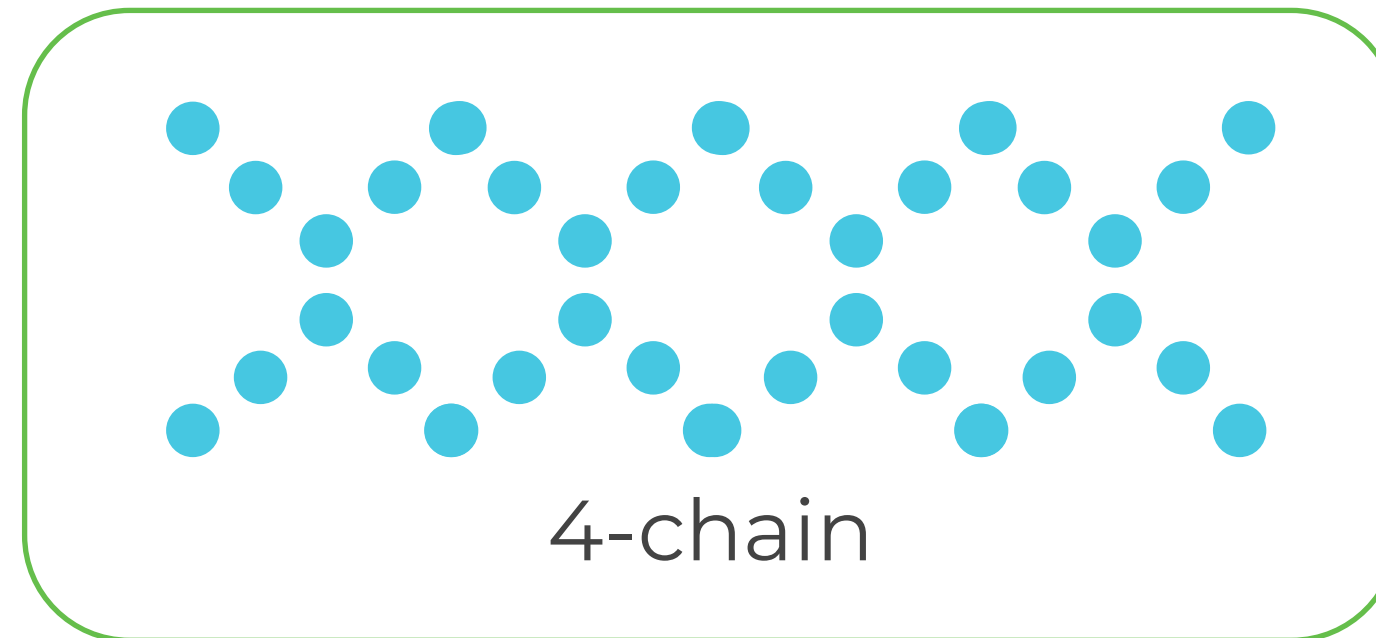
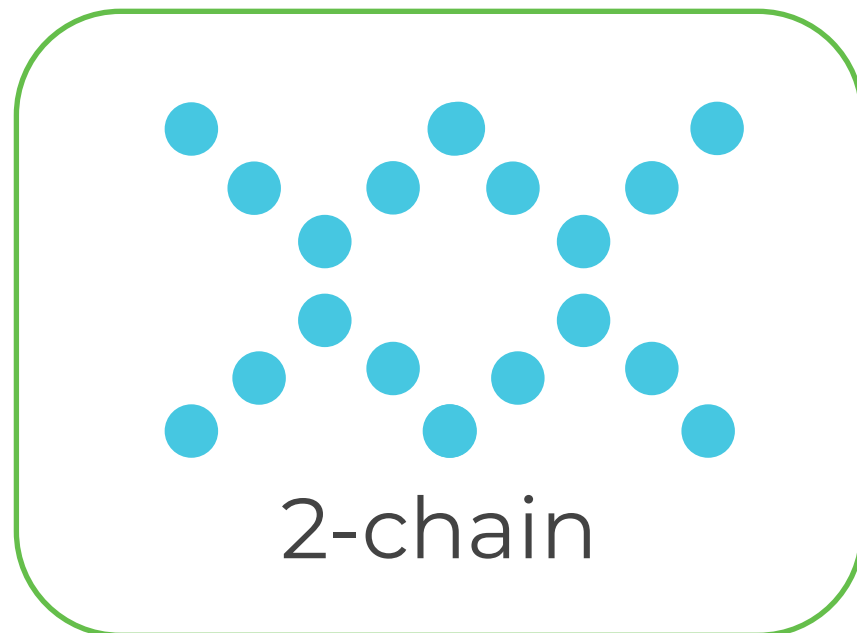


# Explore

Binh forms chains using this pattern of dots.

How could you count the dots in the chains?

What rule will tell you the number of dots in an n-chain?



How could you combine repeats of this shape differently?

How many dots will there be in your new n-chain?

