Mathematics

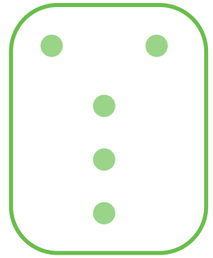
Expressions, equations and inequalities
Counting strategies

Independent Task

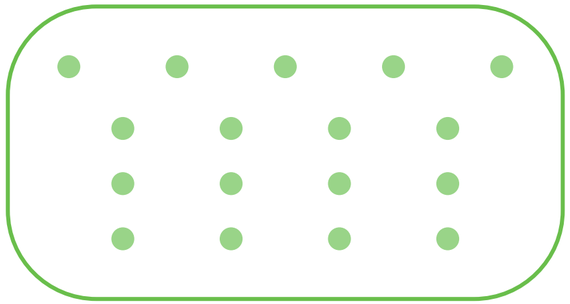
Ms Jones

Try this

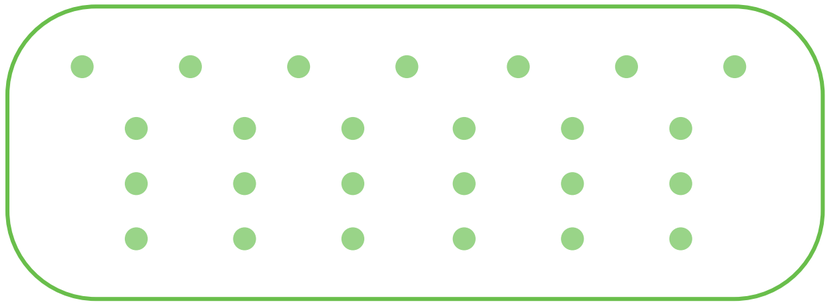
Two students have used this dot pattern to create chains.
How many dots are in each of their chains?
What's your counting strategy?

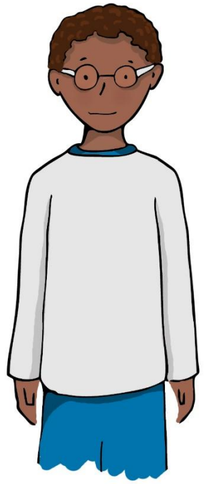


4-chain



6-chain





Draw your own chain diagrams of different lengths. How many dots do they have?

Independent task

1. Substitute $m = 5$ into the following:

a) $3m$

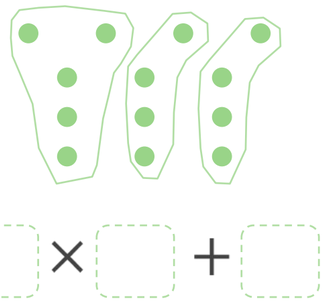
b) $m + 2$

c) m^2

d) $m^3 + m^2 + 3$

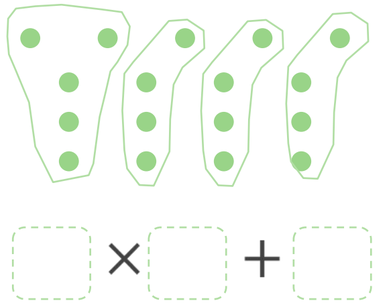
2. Complete the tracking calculation for the number of dots:

3-chain



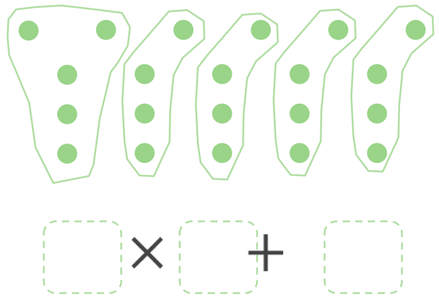
$\square \times \square + \square$

4-chain



$\square \times \square + \square$

5-chain



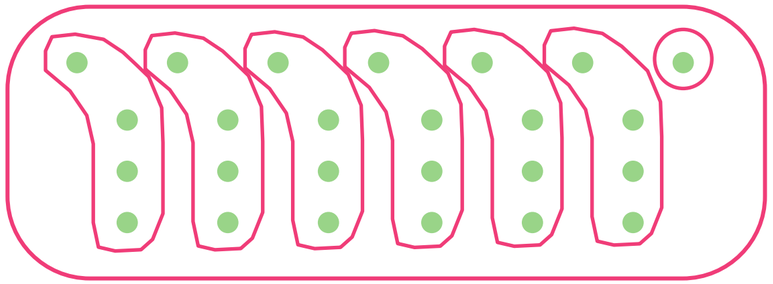
$\square \times \square + \square$

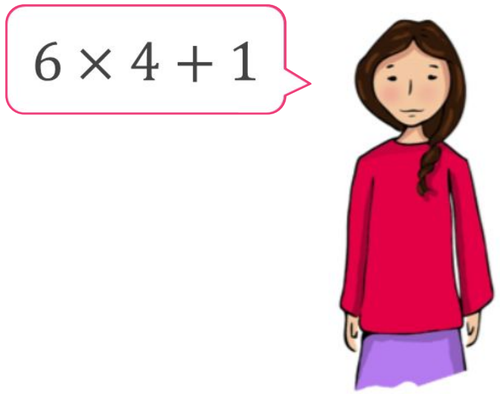
3. Using the grouping strategy from Q2 write a tracking calculation to express the number of dots in a 300-chain.

Explore

A student used a different strategy to count the dots in this 6-chain.

6-chain





Use this grouping and write a calculation to express how many dots there would be in a:

A 3 – chain

B 15 – chain

C 200 –chain

D m -chain