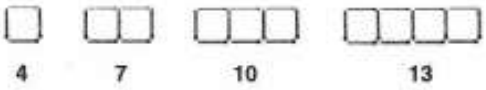
3. They each have found a rule to connect the *number of matches* with the *number of squares* in this sequence.



Karen's rule

To get the number of matches times the number of squares by 4 then take away 1 less than the number of squares.

Joe's rule

Matches equal the number of squares times 3 then add 1.

Rajan's rule

The number of matches is the number of squares times 4 then take away the number of squares then take away 1.

Nikki's rule

Add 1 to the number of squares, multiply by 3 then take away 2 to get the number of matches.

If **m** = *number of matches* and **s** = *number of squares*

Karen's rule can be written in algebra as **m = 4s – (s – 1)**

- Write the other three students' rules in algebra.
- One of the student's rules is incorrect. Which one?
- Which rule looks the simplest?

4. They each have found a rule to connect the *number of sticks* to the *number of circles.*

Karen's rule

The number of sticks is the number of circles multiplied by 2 then take away 2.

Joe's rule

Sticks equal the number of circles times by 4 then take away 2 and then divide by 2.

Rajan's rule

The number of sticks is the number of circles times by 4, divide by 2 then take away 2.

Nikki's rule

Take away 1 from the number of circles then multiply by 2 to get the number of sticks.

- Write all the rules in algebra.
- One of the student's rules is incorrect. Which one?
- Which rule looks the simplest?

Look at some other sequences and try to write the same rule in different ways.