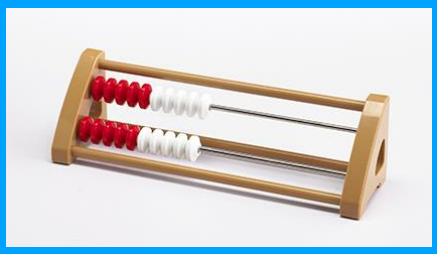
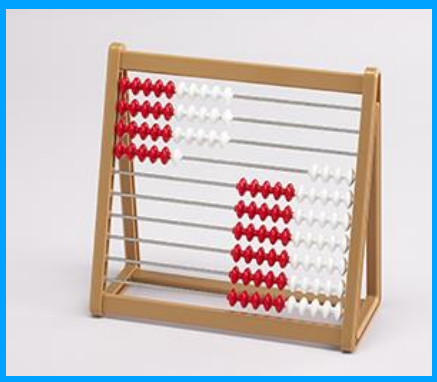
Brault & Bouthillier

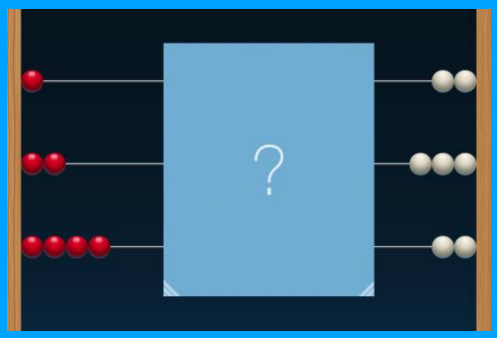
Developing algebraic thinking using a
Rekenrek Abacus

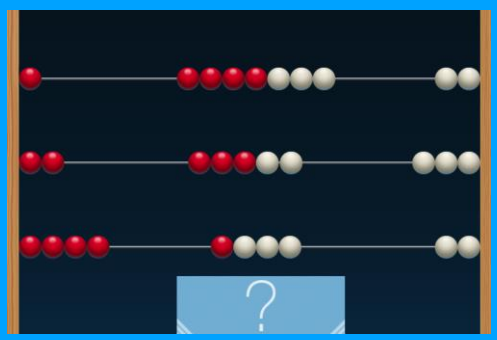
The Rekenrek abacus is a tool that goes way beyond the traditional abacus. In the *number sense* domain, it allows to focus on the number markers. On a 20 bead Rekenrek we can easily see the number markers 0, 5, 10, 15 and 20. On a 100 bead Rekenrek, you can not only see the groups of ten, but also the number markers 0, 25, 50, 75 and 100.





For example, a student that represents the number 6 could move 5 white beads and 1 red bead to the right, instead of counting each bead one by one. This means we are focusing on the number markers by saying "It's one more than 5".





When we are developing algebraic thinking in a student, the Rekenrek is a very effective tool to develop the concept of the unknown. In fact, the student knows the total number of beads (30 in the example to the left). He or she must determine the number of beads hidden (the unknown) by a piece of cardboard or a towel. The student can count the number of visible beads (14 in this case). In this example, the equation would be 14 + ? = 30 or 14 + x = 30.

The student can use a variety of strategies to find the value of the unknown and then simply remove the cardboard to check if the value is correct. The students can work in pairs, one student prepares an equation with an unknown by hiding some beads and his/her partner tries to determine the value.

2263358	2 x 10 Student Rekenrek Abacus	$ 6,95
2263325	10 x 10 Student Rekenrek Abacus	$ 17,95

Created by Dominic P. Tremblay