

Calculating caterpillars

Children add and subtract 1 and 10 in order to reach targets.

Skills practised:

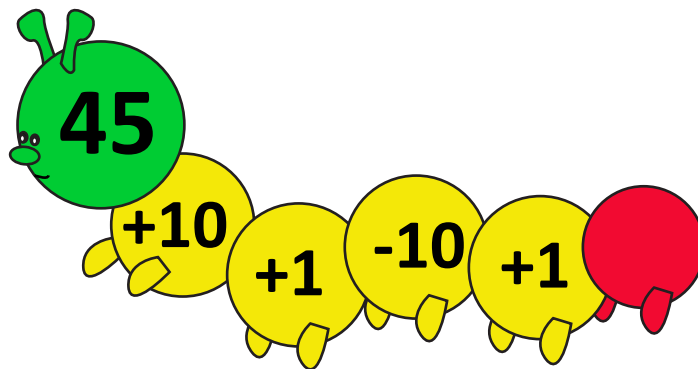
- Add and subtract 1 to/from 2-digit numbers
- Add and subtract 10 to/from 2-digit numbers

Conjecture: *It is possible to make many different numbers by adding/subtracting 1/10 four times, including the starting number.*

What to do:

Children work individually or in pairs.

1. Children start with 45, then add and subtract as they move along the caterpillar. What number do they finish on? They write this in the last segment.



2. Ask children to make their own calculating caterpillar, beginning at 45. They write +10, -10, +1 or -1 in each segment (*see resource with child sheet*).
3. Can children make a caterpillar starting at 45, and ending at 43?
4. Can they make a caterpillar starting at 45, and ending at 5?
5. Can they make a caterpillar starting at 45, and ending at 14?
6. What other numbers can they make?
7. Can they make up a caterpillar starting at 45, and ending at 45?
Can they see a trick to do this really easily?

HINT: Ask children to think what happens when you add 10, then subtract 10.

Children could make their own length caterpillar.

CHALLENGE: Can they make a REALLY long caterpillar which starts on 45 and ends with 45?

Aims:

- To use trial and improvement
- To begin to understand inverse operations

Minimum number of calculations expected

20