LogiSim Calculator

Build a calculator that can add and subtract decimal **unsigned** integers. The

calculator should have a display of 5 decimal digits.

- There should be a number pad with digits:
  - **0, 1, 2, 3, 4, 5, 6, 7, 8, 9**
- and 3 possible operators:
  - **+** (addition)
  - **-** (subtraction)
  - **=** (equals)

The flow of the operations should be as follows (as in a regular calculator):

1. While typing the number it should be displayed right aligned, extending to the left.
2. After pressing "+" or "-" display should be reset to empty, and the next number should be typed.
3. After typing the second number, "=" should be pressed and the display should contain the final result.

Specifications for input-output size and structure of the circuit (Important!):

For addition and subtraction modules the circuit should work directly on BCD numbers.

For addition and subtraction operations each entered number can be **at most 4 digits**. Entered numbers are **positive** (no negative numbers as inputs). However, for subtraction the **result can be negative**. Therefore, the leftmost display (5^{th}) should show **minus sign** for negative results and a **number** for positive results.

Your circuit should exactly match with the above specifications.