

Problem 1

The only thing separating it from doing a bunch of gradient ascent runs is the term $\alpha v_i^{(t)}$, that transfers a fraction of the displacement in the last iteration, giving the particles a sort of momentum. The particles would behave as balls that roll upwards instead of downwards.

Problem 2

It isn't really necessary to know what the function numbers mean in order to draw the diagram. The functions could be anything from simple binary operators (AND, OR, XOR, etc.) to real-valued arithmetic operators, to signal processing operations and so on.

