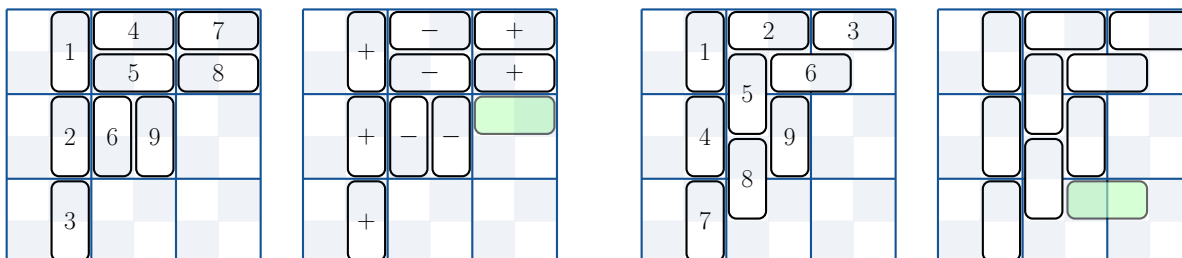
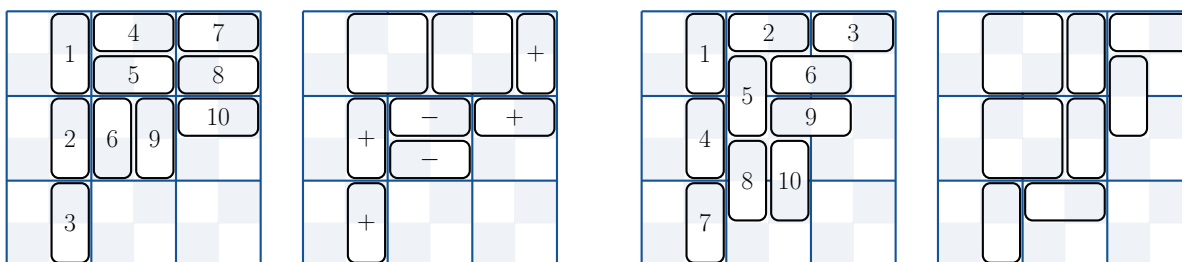


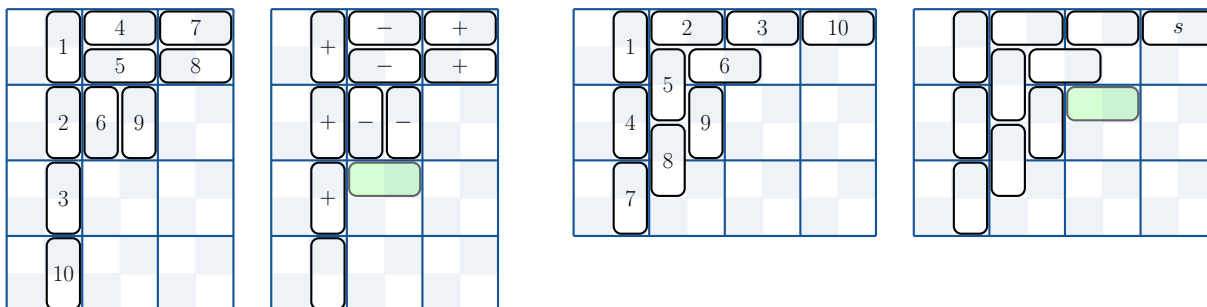
Here is an example of joining two cycles at the top.



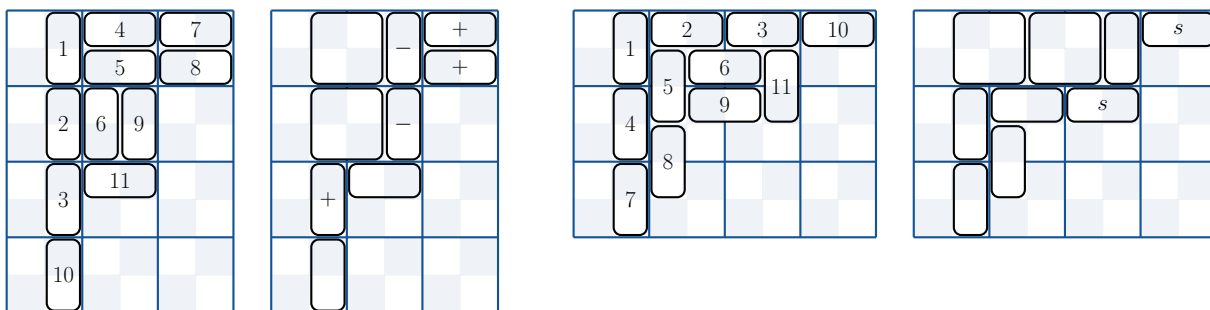
goes to



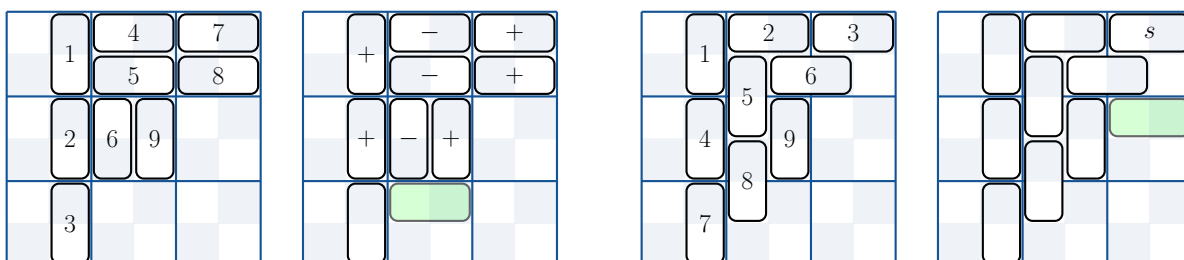
Here we are joining two cycles at the top on the dual side.



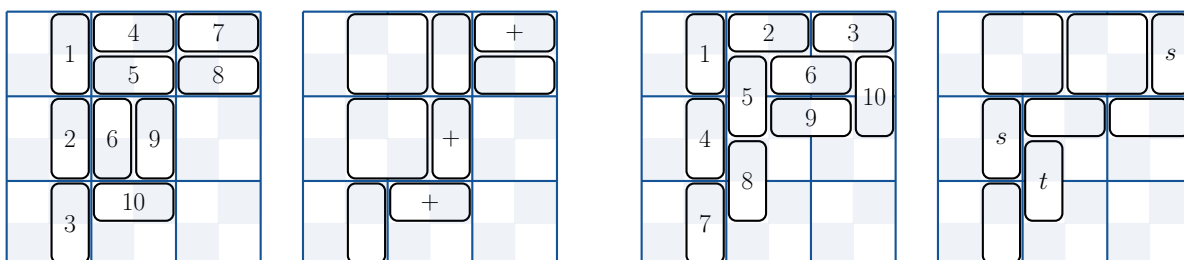
goes to



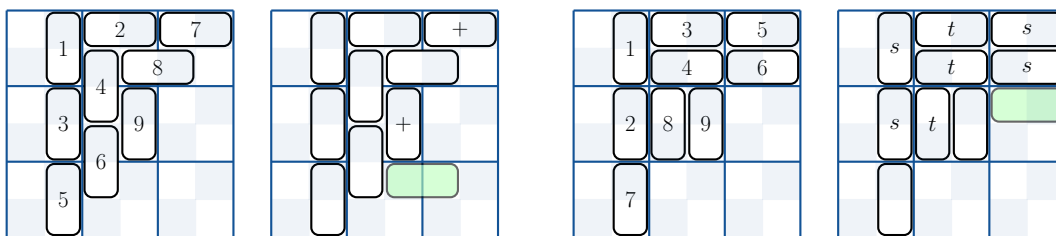
Here we are joining two cycles on the bottom.



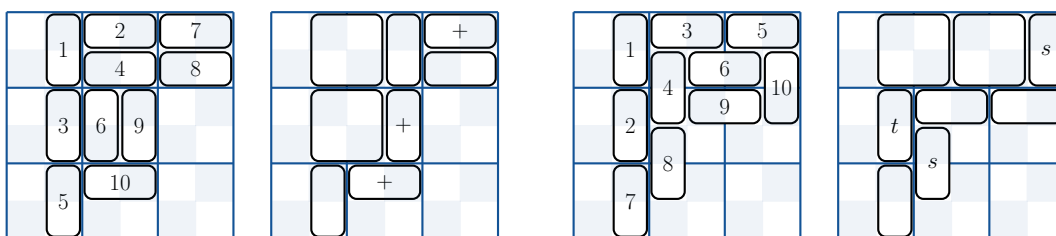
goes to



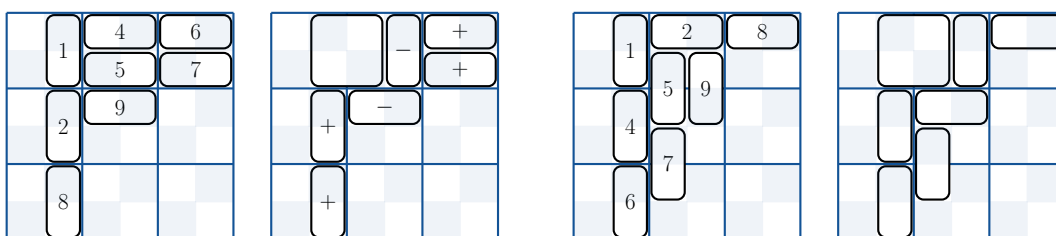
Here we're joining two cycles on the bottom, where the outer of the two joined cycles is unboxed. So, the domino comes in at grid position  $Y$ . (This is the same as the previous example, except with the outer of the joined cycles moved through.)



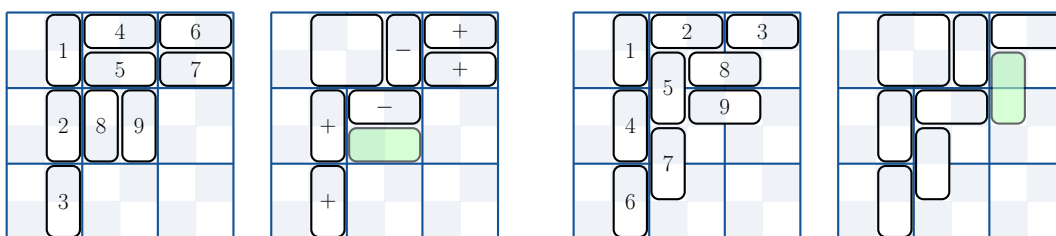
goes to



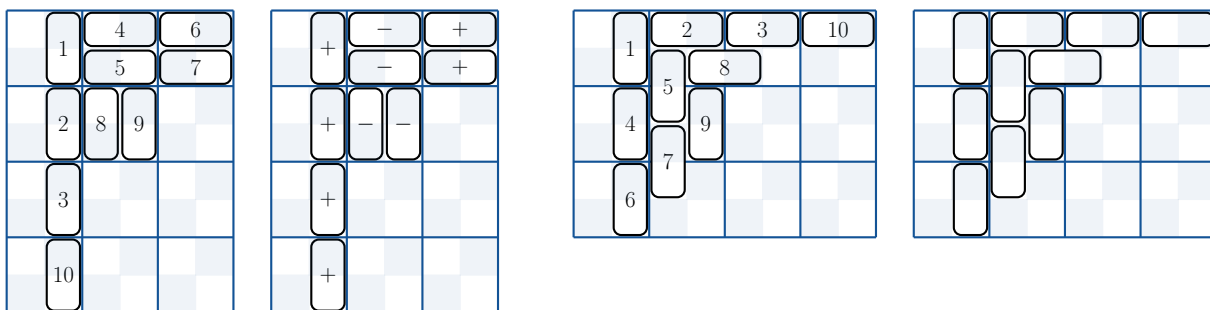
Here we're opening two cycles at the bottom.



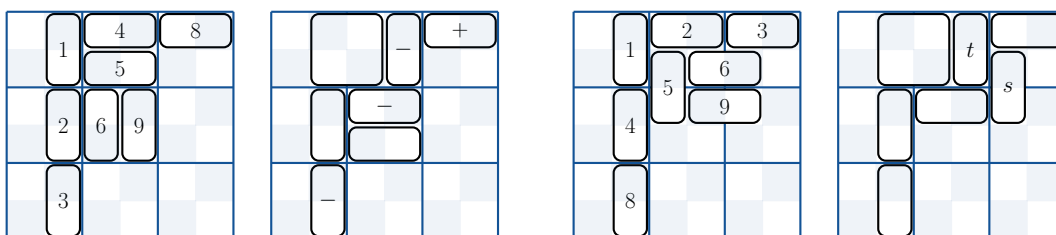
goes to



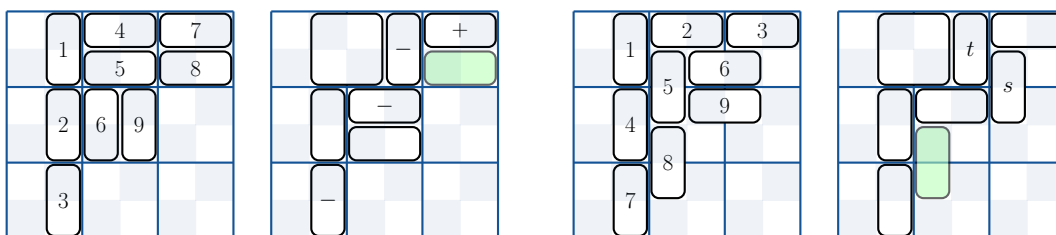
goes to



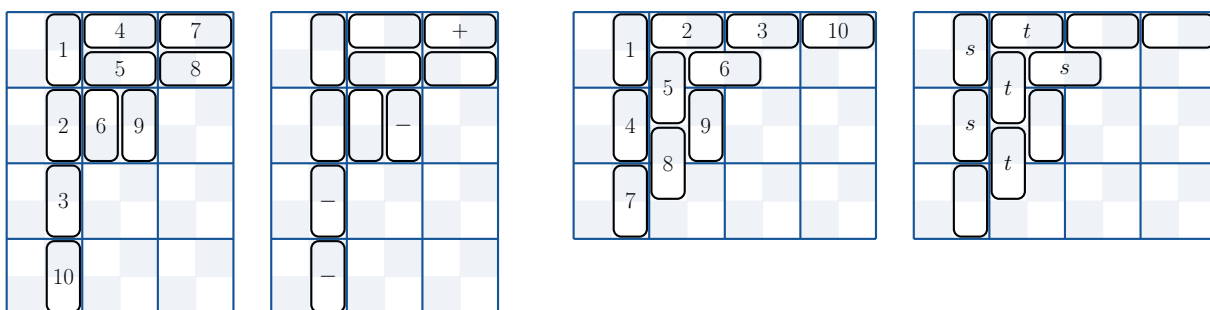
Here we're opening two cycles at the top.



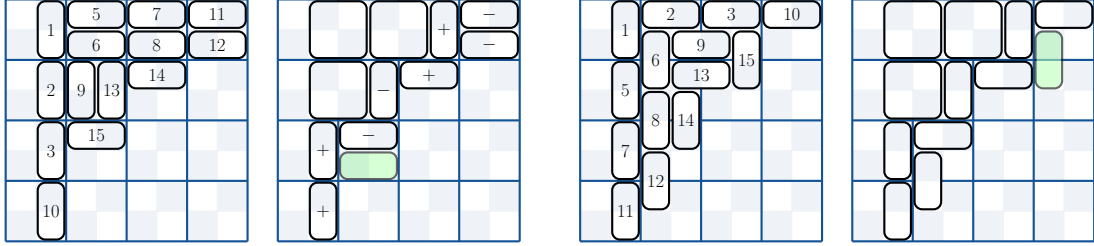
goes to



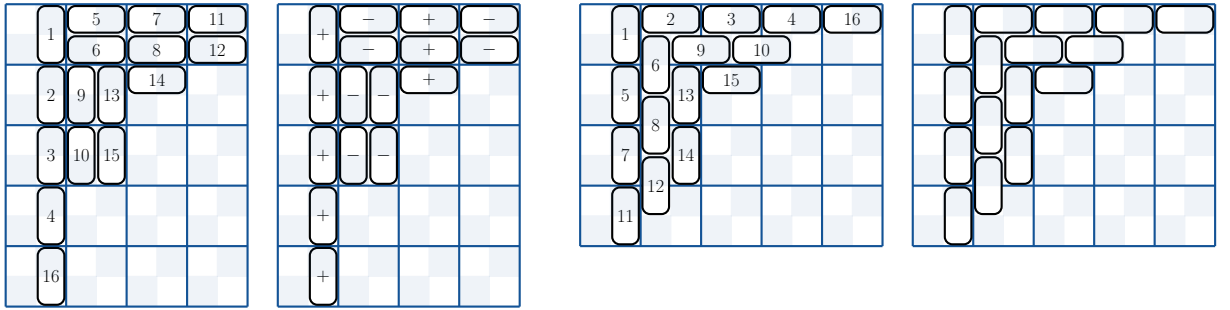
goes to



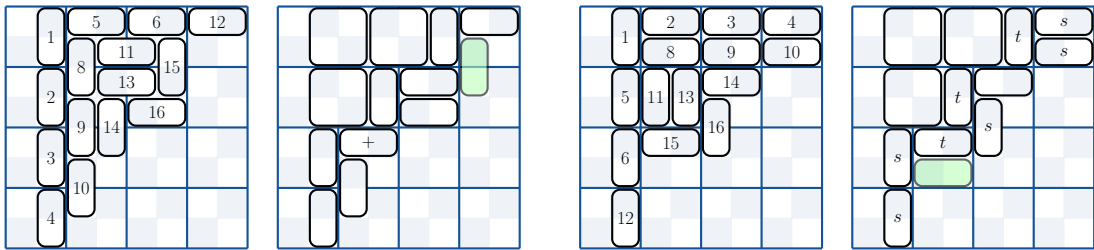
Here is a bigger example of opening a cycle.



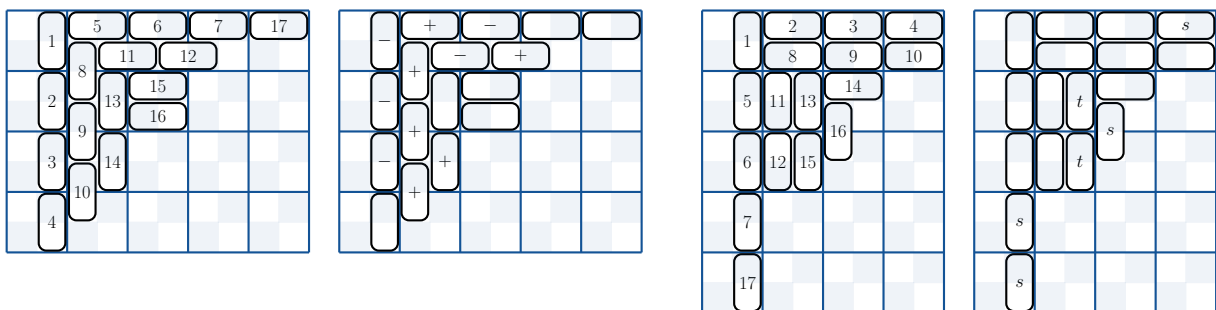
goes to



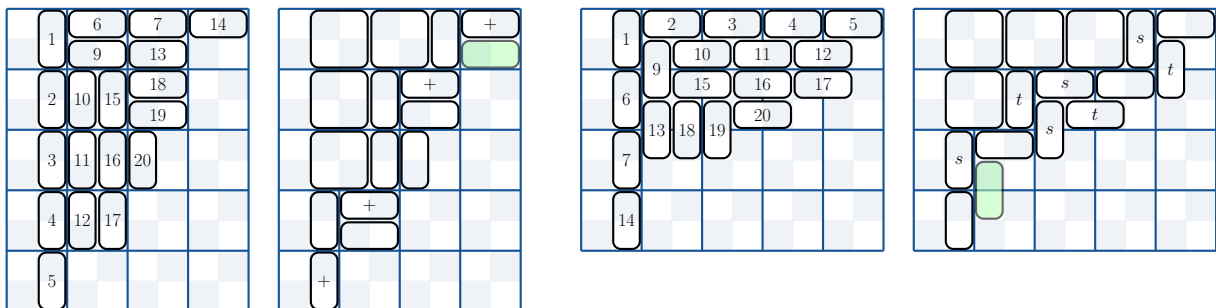
Here is another example. The  $+$  sign is taken out of the upper Type I cycle. Before doing that, its sign is used to determine the signs of the Type II cycle.



goes to



Here is an example where the Type I cycle has a paired cycle in the funny situation. In terms of what's really going on, the  $s$  and  $t$  signs within that cycle are backwards. So, the algorithm switches those signs. It also adds this nested cycle to its switch list, so that the signs can be switched back once the rest of the procedure is complete.



goes to

