Assignment 16

The rule has a silent state, if a dead cell is has no neighbours. I wouldn't characterize it as totalistic, without having specified some kind of binary value to the neighbouring cells. It is symmetric though, since the 23/3 rule doesn't depend on the position of the neighbours. So each symmetric configuration will lead to the same result. It is legal, since it is symmetric and shows a silent state. It is not peripheral, since the outcome is in any case dependent on whether the cell os dead or alive. ∎

Assignment 17

That it is possibly to create a Game of Life pattern that can grow infinitely. ∎

Assignment 18

Class IV. It's evolution leads to complex structures, even releasing a glider at some point of it's evolution, and the *r-pentomino* is long lived. ∎