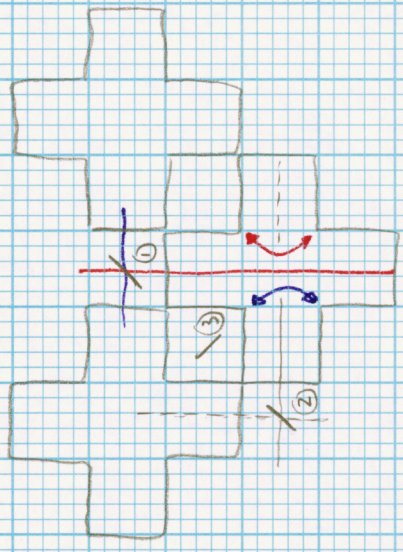


Cross tiles around a C tile are all end on with long stripe towards centre. If choose one cross tile to 'head' in (i.e. with red arm on its right) then all four crosses must be head in because then at 1 one A or B by in arrows and stripes of red and blue cross them.

Likewise, if one cross is chosen head out from the C tile then all four crosses are head out.

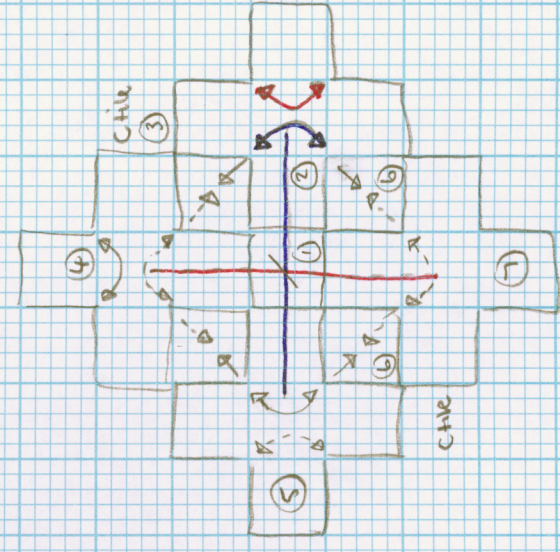
LEMMA 2 A C tile is surrounded only by 4 cross tiles, all head in or all head out



Given cross with A or B 1 out head of cross: 2 must be A or B because a C tile prohibited by lemma 1. But new 3 is A or B since needs two out arrows to satisfy 1 and 2. Hence we cannot have A or B tile on head of cross.

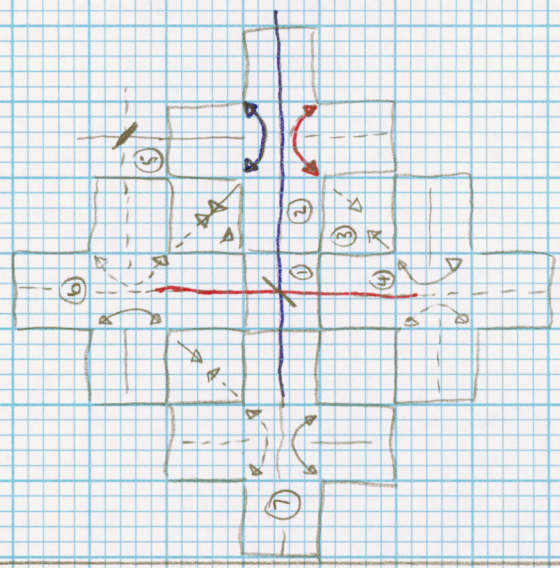
(A similar argument follows for the cross tile with a blue main stripe.)

LEMMA 3 The head of a cross tile always has a C tile on top.



Similar arguments follow when colours reversed

Given 1 A or B tile on tail of cross tile 2. Cross at 4 must also be tail in to 1 by arrow from 3 and stripe from 1. 5 Cannot be C tile by lemma 1 on cross 2, so 5 is A or B tile. Likewise cross at 6 cannot have an A or B tile on head at 5 so tail must be towards 1.



LEMMA 4A If an A or B tile has one cross tail in to it then it has 4 crosses tail in.

Similar arguments apply to initial cross with red stripe.

Given A or B tile 1 and cross tile with side arm adjacent at 2 then 3 must be a C tile by lemma 3. Cross at 4 must have either head or tail towards 3 by lemma 1 - red stripe from 1 decides for head towards 3. 5 is not cross with head left because blue curved stripe then wrongly on right; not head to right by lemma 3; not head up because of blue on right arm again, so is head down. Arrow matching from A or B tiles at 6 makes 7 a cross with head to left. LEMMA 4B A or B tile with one cross side arm adjacent has two pairs of crosses with heads together.