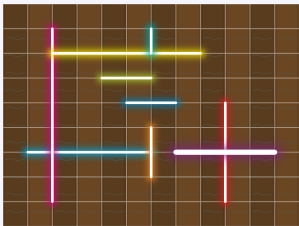
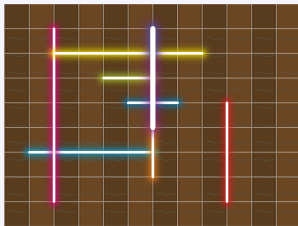


- Given  $n \leq 2 \cdot 10^5$  axis-aligned segments in 2D (neon light tubes).
- Horizontal lights do not touch other horizontal lights, same for vertical.
- Can you move/rotate one light to form a square?
- Up to 20 000 test cases per run, with at most  $2 \cdot 10^5$  tubes in total.



Example initial light configuration.



The purple neon light was moved to make a  $4 \times 4$  square.



Mulled wine stall at the Leipzig Christmas Market. CC BY-SA 4.0 by Joachim Köhler on Wikimedia Commons