Initialize $e_1 - e_{18}$
We can also just look at $p_2$ on polygon $p_2$.
detect right cusp: p17 splits an edge

1) p17 falls in middle
2) e16 & e17 are right of sweepline and form ccw turn

2 nodes: 2 verticals
new vertex below current range
not a cusp (no new vertical)
CW turn
P18 is in the range e17-e18:
1) on or below e17
2) on or above e18
because it's on both edges in same node
(also CW turn)
detect "end"
kill node: no new vertices
slope change: new vertical
p15 falls in gap between 2 nodes: insert.
Re-balance: 2 rotations
Ps falls inside range of some node.
P4 matches both endpoints of one node.
First example of merge

For p6:
e5 & e6 are left of sweepline
& make ccw turn (compare to p18)

Also p6 matches 2 endpoints in different nodes. p2
Merge again
For every trapezoid:
connect 2 polygon vertices if not already joined w/ edge

\[ e_{11} \quad e_{12} \]
Monotone sub-polygons based on trapezoidation
Alternate rule for adding verticals during sweep

ONLY AT CUSPS
Every cusp has a resolving diagonal (in this case I swept a vertical away from cusp)
Fewer components