(a) The user draws two lines that meet at a common point. The lines should be the same length and form a 90 degree angle.

(b) The recognized sketch is stored as three points (P1, P2, P3), two segments (L1, L2), and two constraints (right angle C1 and same length C2).

(c) A *change vector* is computed for each point involved in a constraint. For right angles, points are rotated about line midpoints. This shows P2 and P3 rotating.
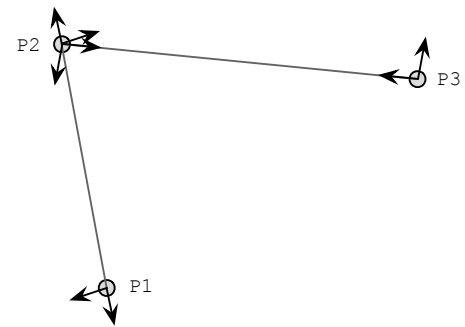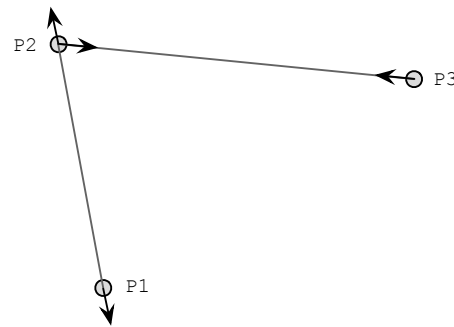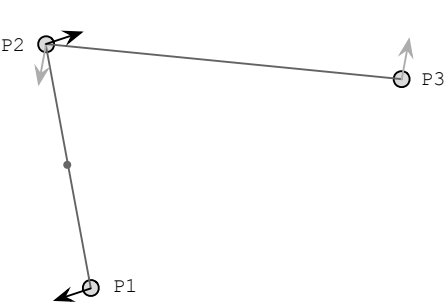
(d) Rotating the other line associated with C1. Note that two change vectors are calculated for P2 because it is in both lines.

(e) Change vectors for all points involved in the same length constraint. Again, P2 receives two change vectors.

(f) Finally, add all change vectors for each point to form a *total change vector*.
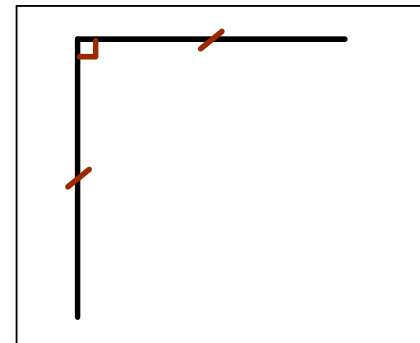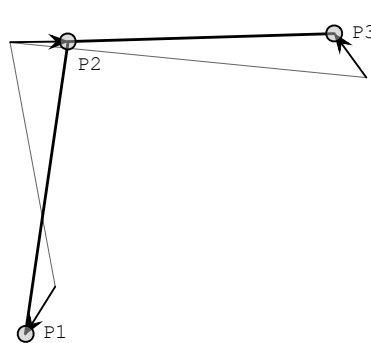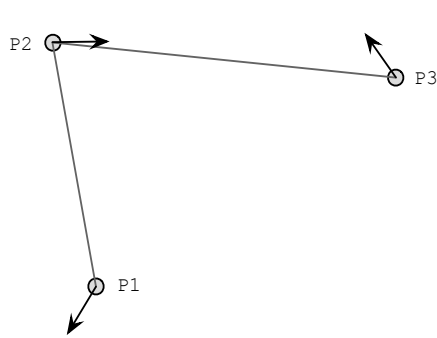
(g) Total change vectors shown for all points.

(h) Finally, translate each point along its total change vector. This is usually a better solution than before.

(i) Iterate steps *b* through *h* until the constraints are satisfied within some tolerance. This is the final result.