

- (1) Given a convex $\square ABCD$, there are many possible configurations for its Voronoi polygons, the sets of points within the polygon closest to a given vertex. At least the following are possible:

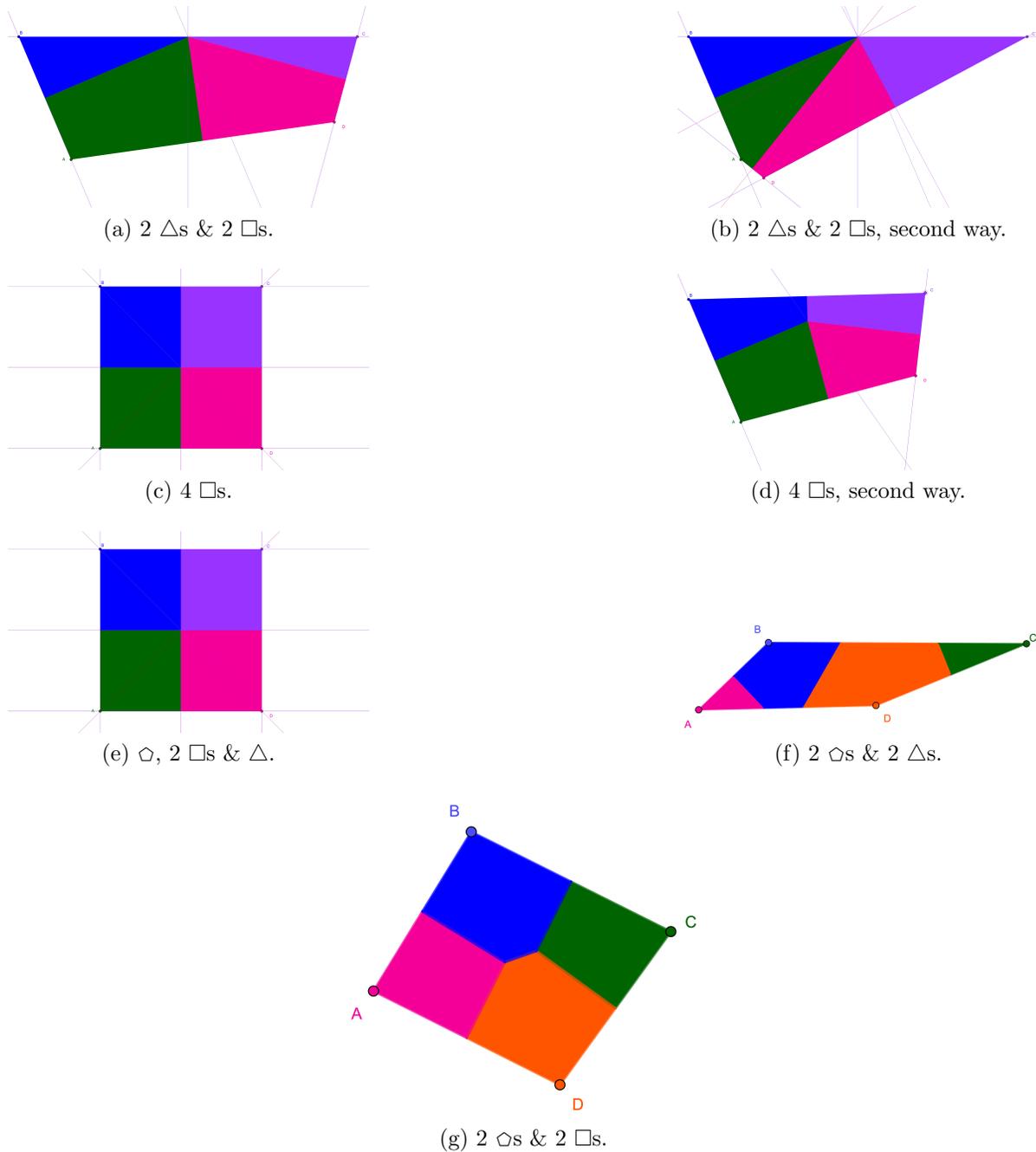
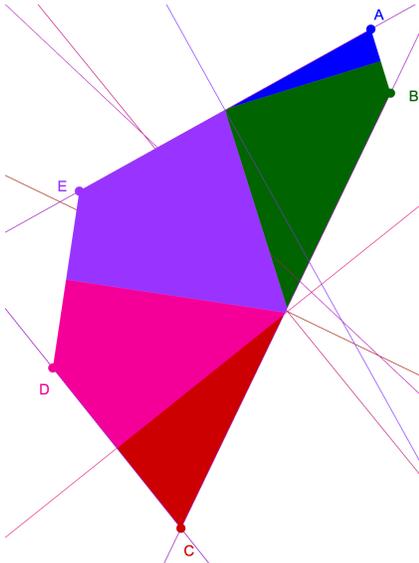
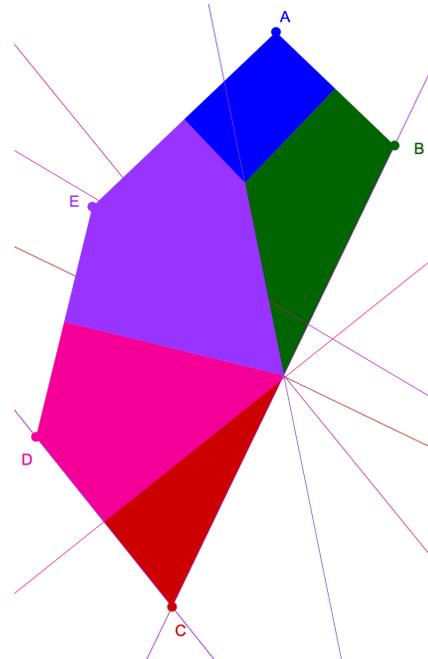


Figure 1: 5 distinct Voronoi polygon configurations for $\square ABCD$.

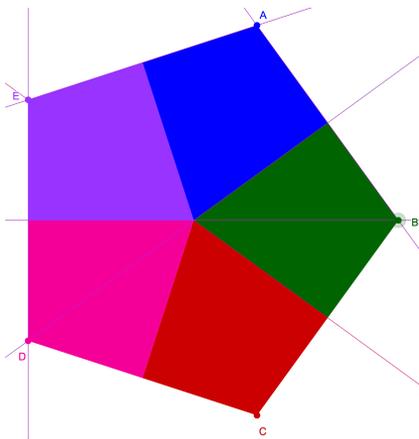
(2) Similarly, given a convex $\square ABCDE$, many Voronoi polygon configurations can be found. I suspect this list is not comprehensive, but here are at least some:



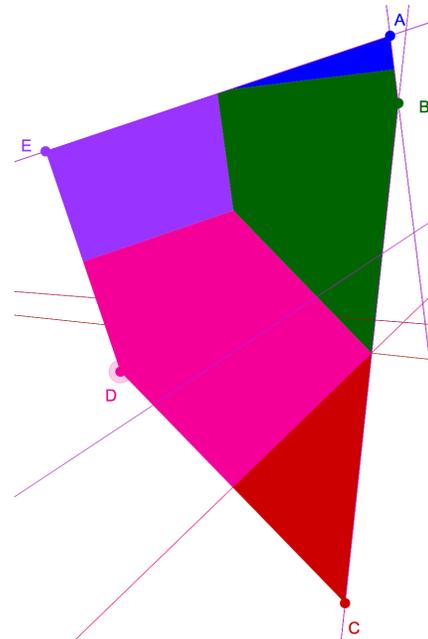
(a) 3 \square s & 2 \triangle s.



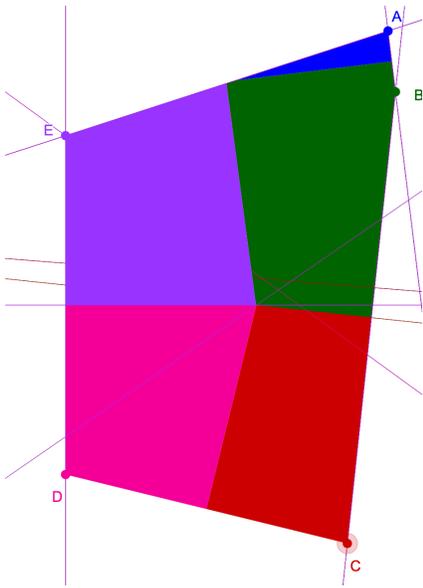
(b) 4 \square s & 1 \triangle .



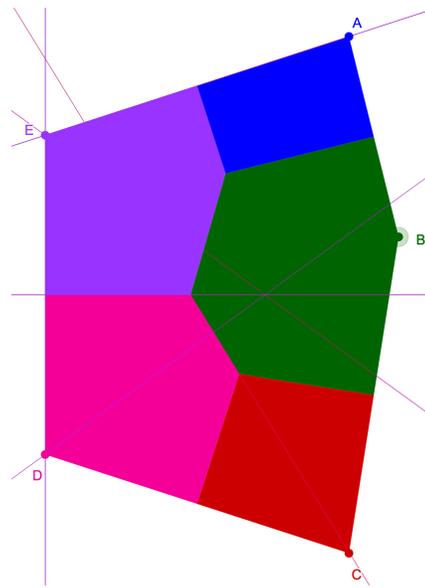
(c) 5 \square s.



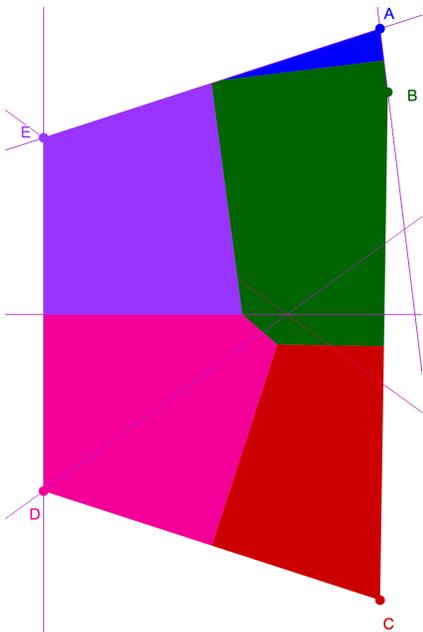
(d) \square , 2 \square s, & 2 \triangle s.



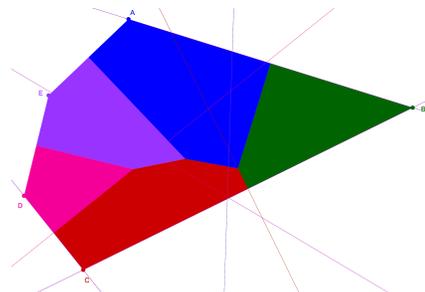
(e) \triangle , 3 \square s & \triangle .



(f) \square & 4 \square s.



(g) \square , \triangle , 2 \square s, & \triangle .



(h) \square , 2 \triangle s & 2 \square s.

Figure 2: 8 Voronoi polygon configurations for $\triangle ABCDE$.