

Fun with Graphs

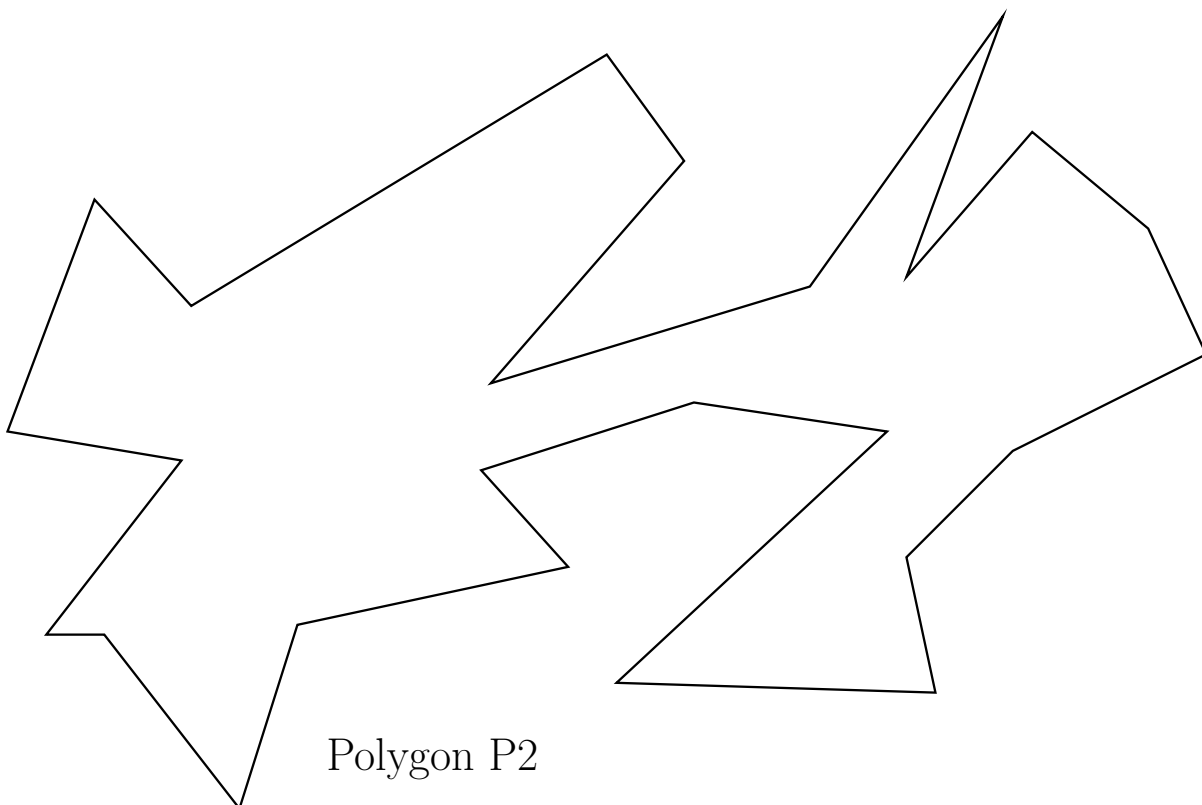
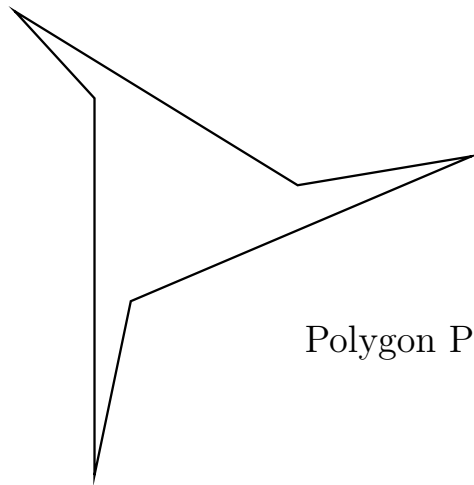
Problem # 12

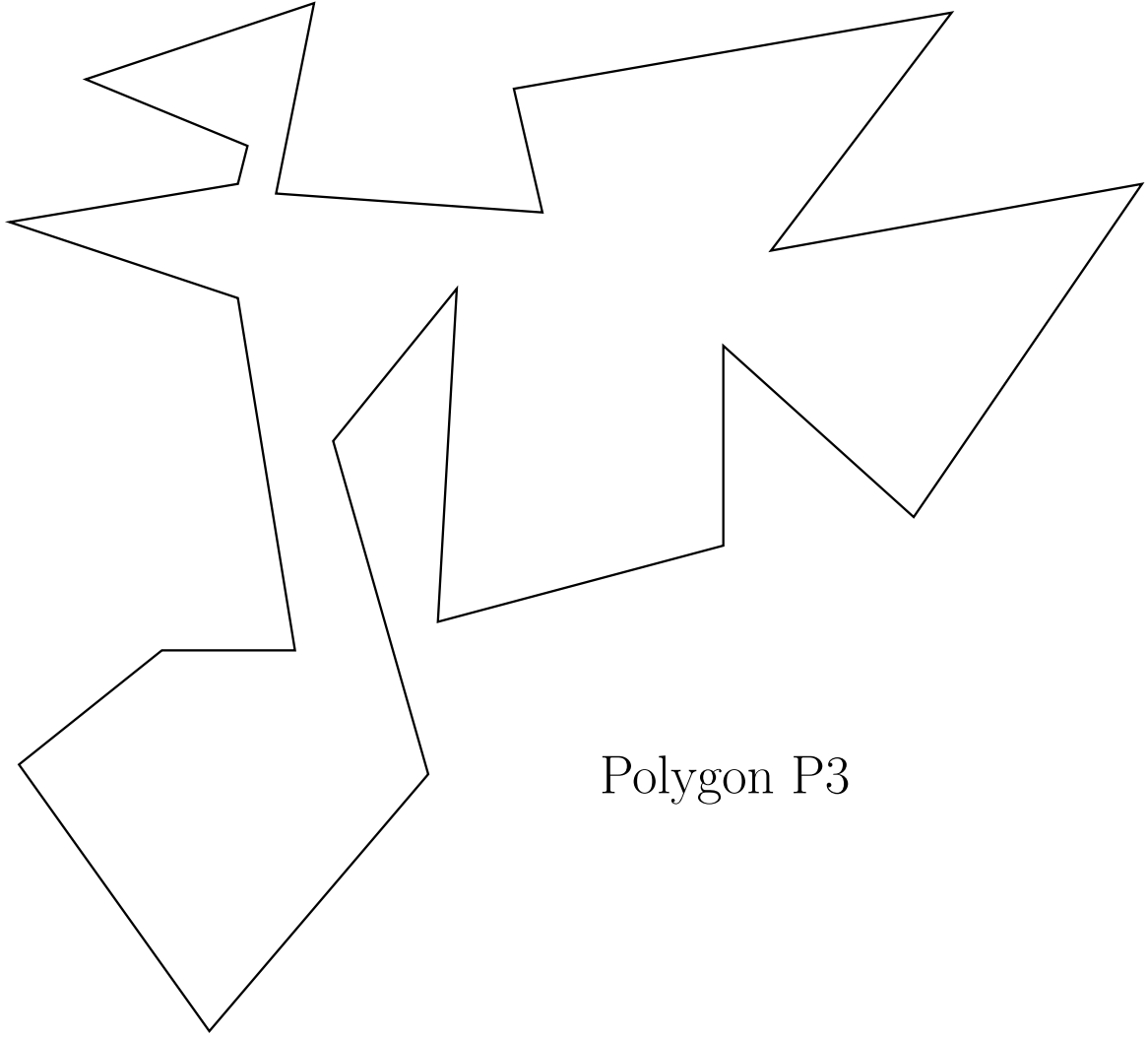
This week we will consider the ART GALLERY THEOREM. Given a polygon (art gallery) with n sides, how many guards are needed to see the entire polygon?

Question 1: Design a polygon with n sides that needs *few* guards. How many?

Question 2: Design a polygon with n sides that needs *many* guards. How many?

For the following polygons, try to find as few guards as possible that see all of it. Try to find the maximum number of independent witness points:





Polygon P3