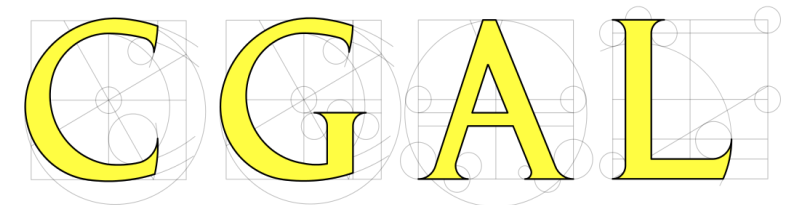
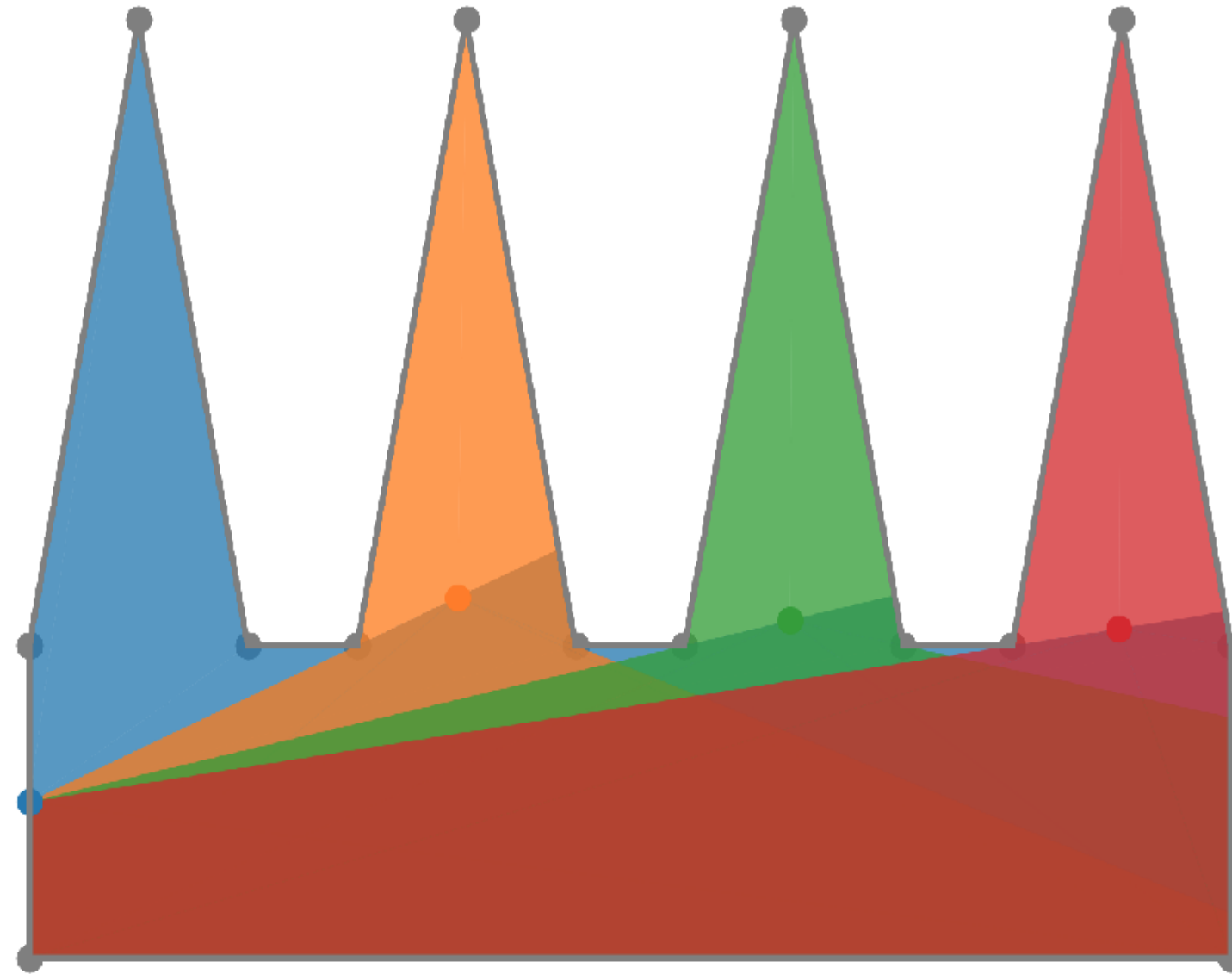


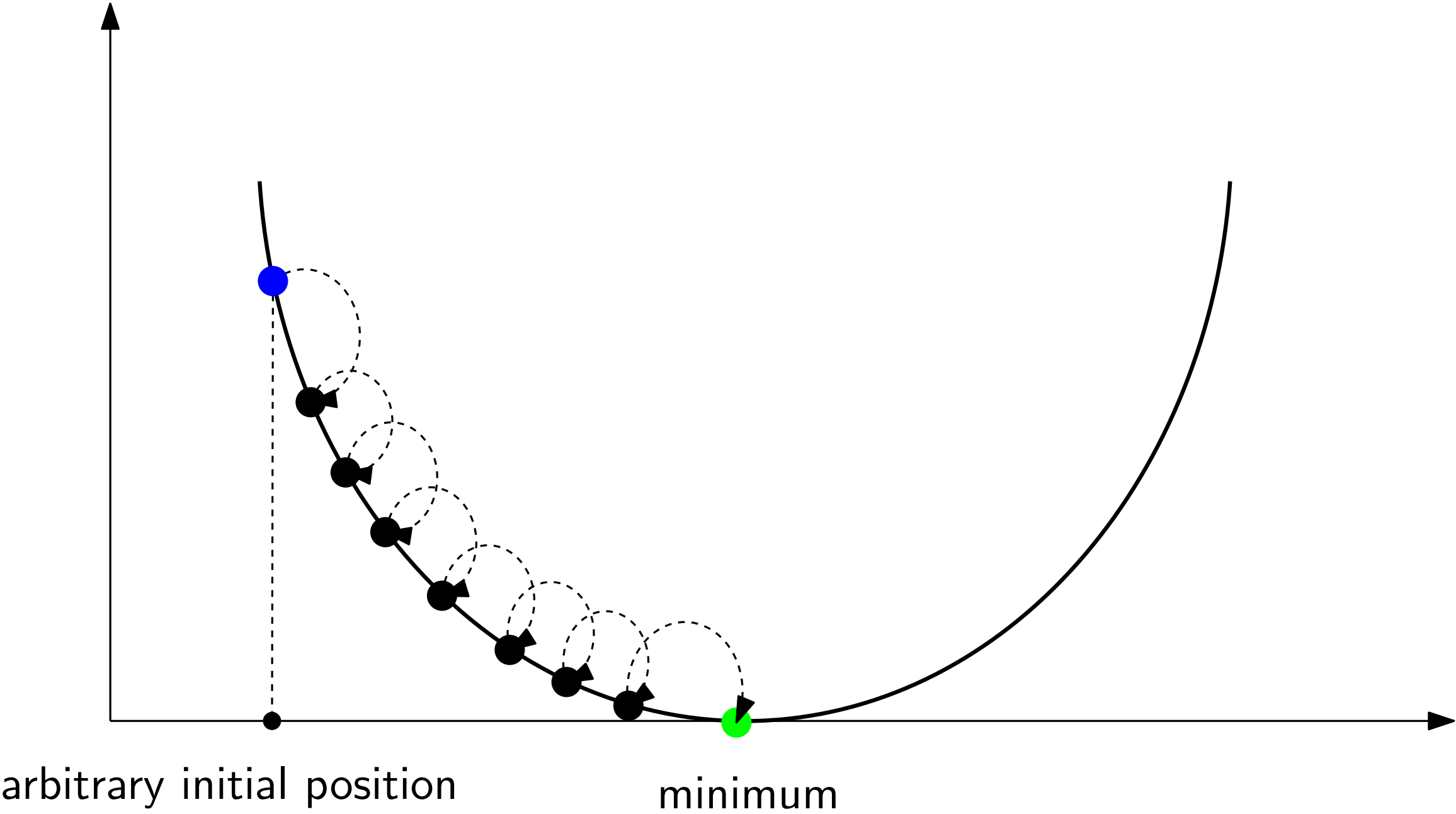
Solving the Art Gallery Problem Using Gradient Descent

Geo Juglan

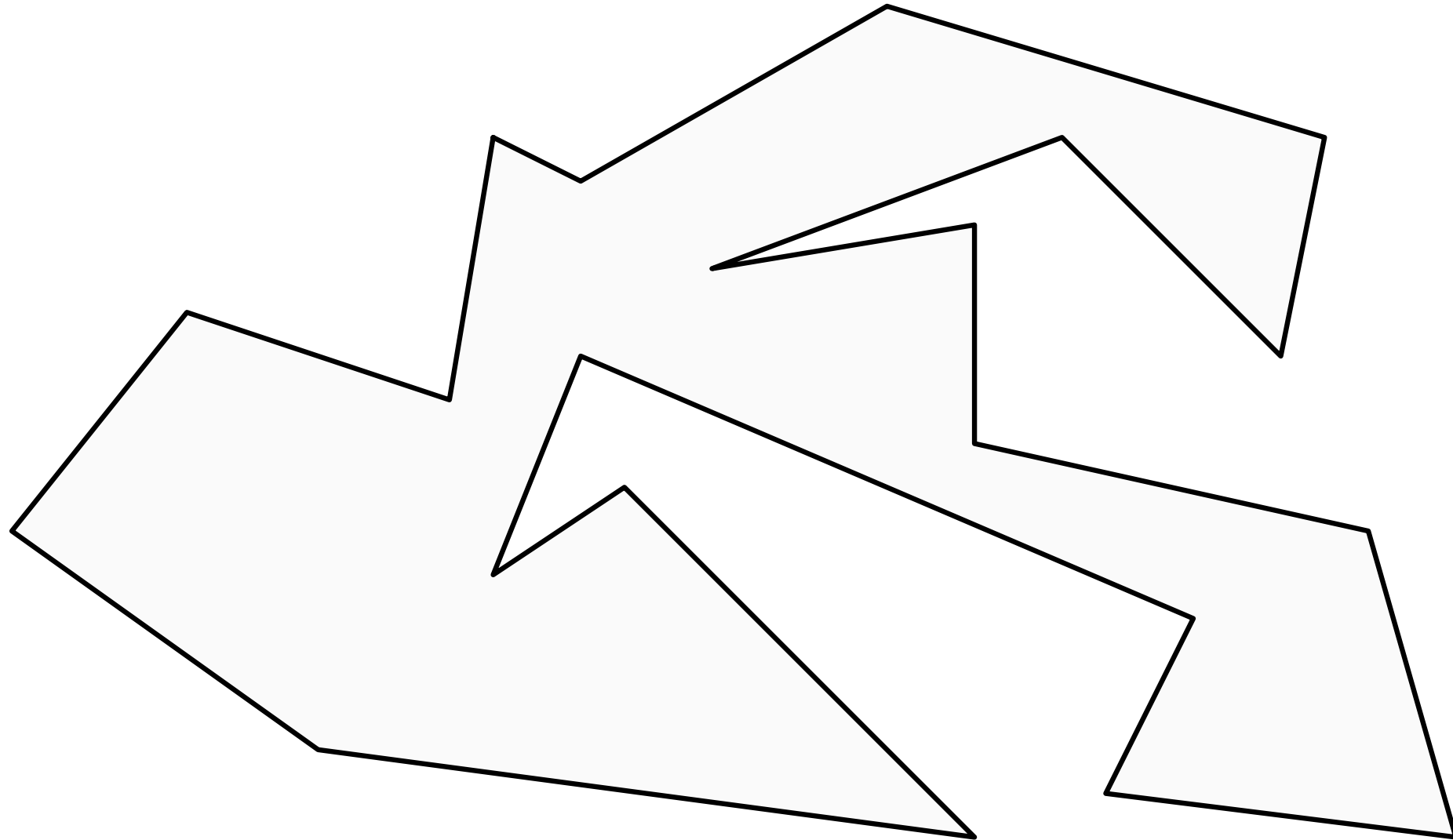
Till Miltzow



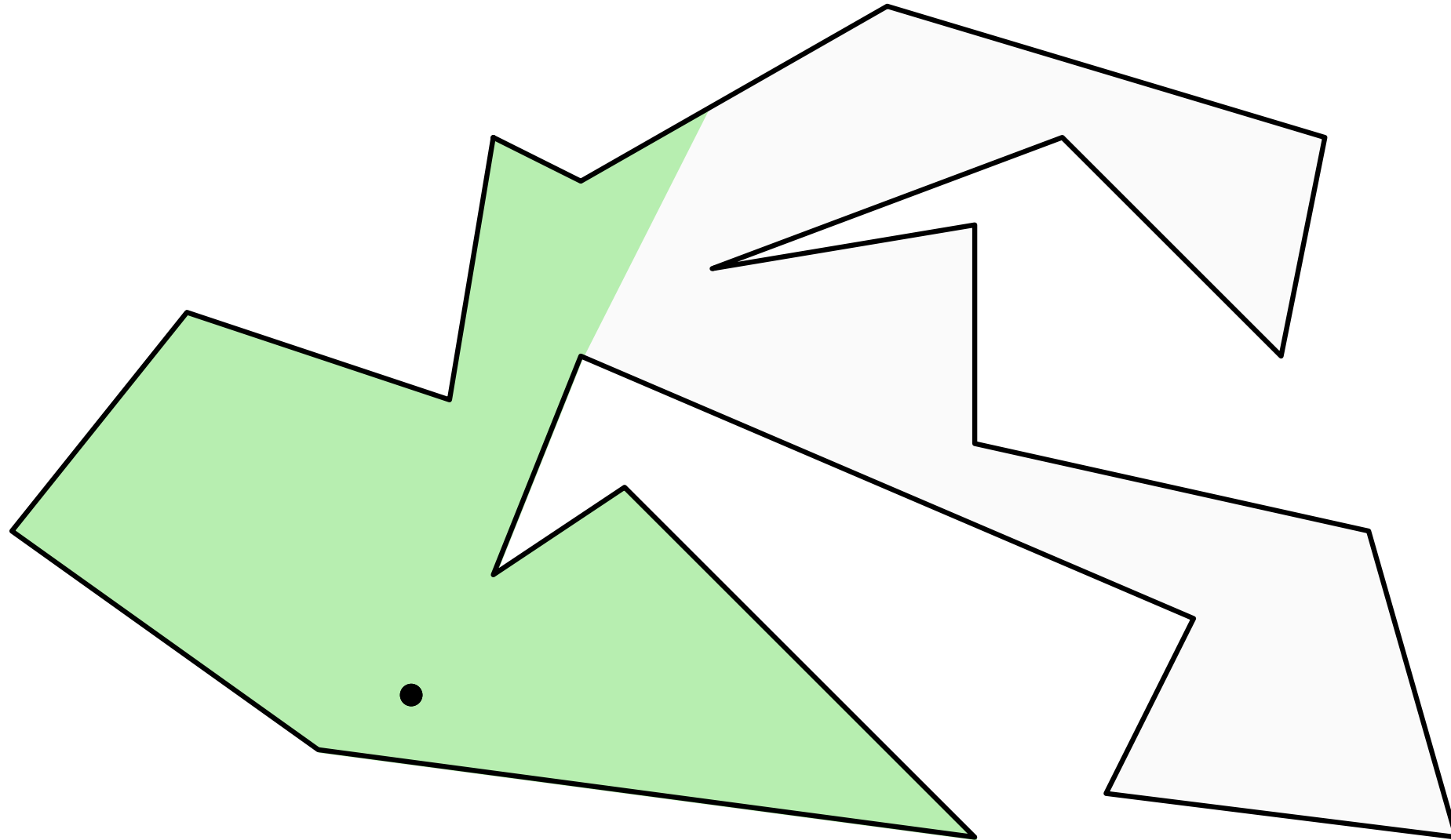
Gradient Descent



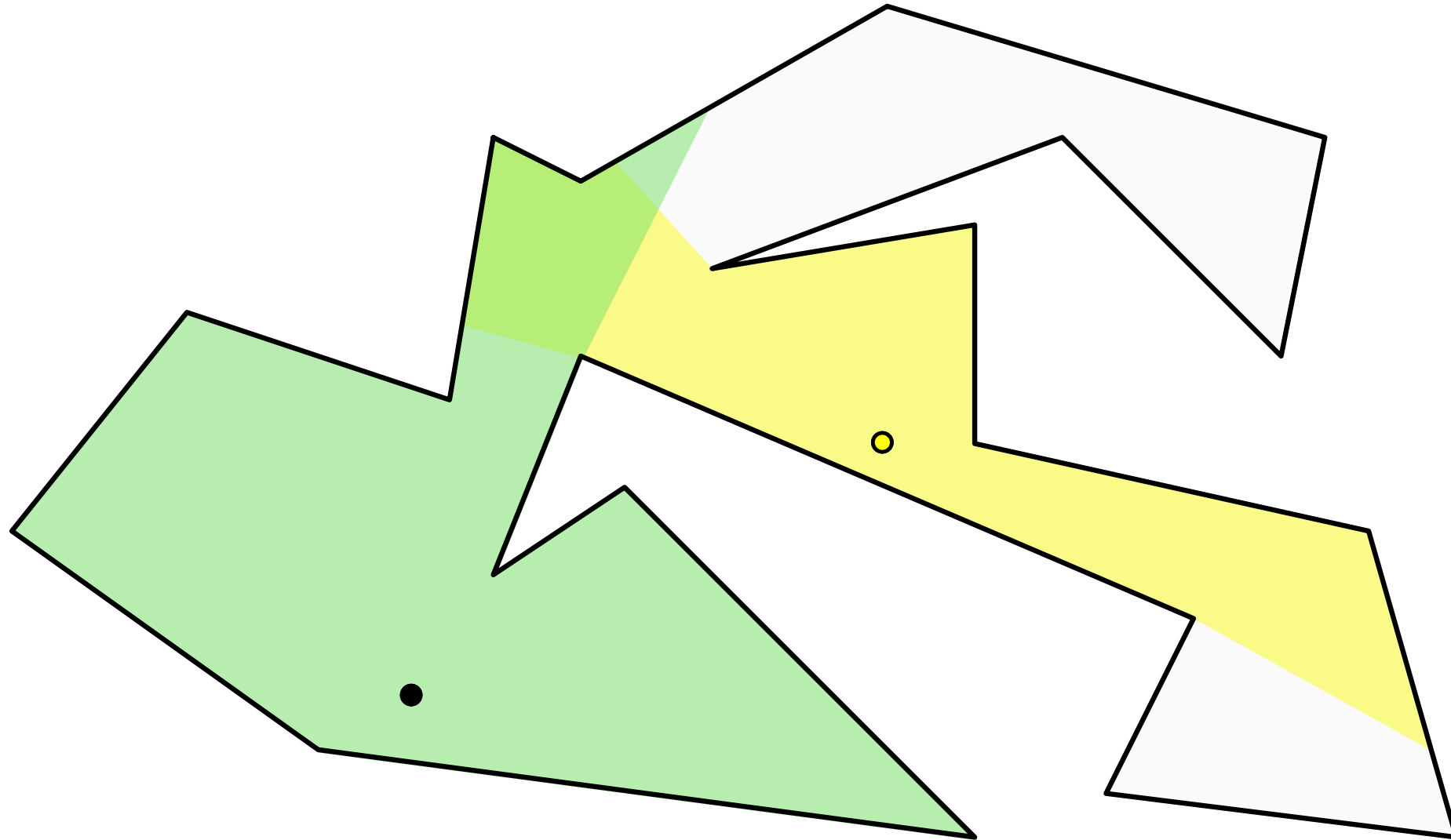
The Art Gallery Problem



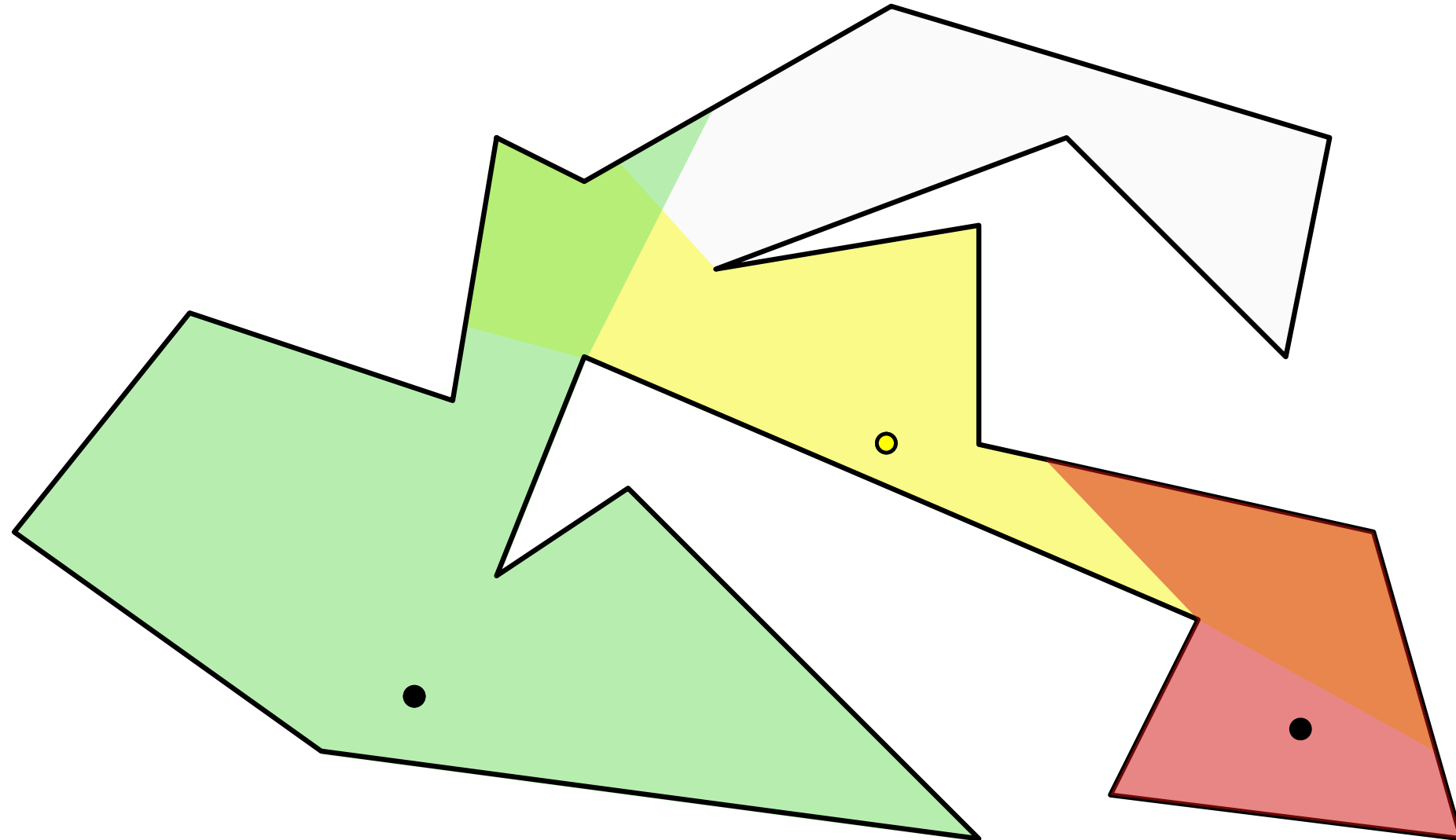
The Art Gallery Problem



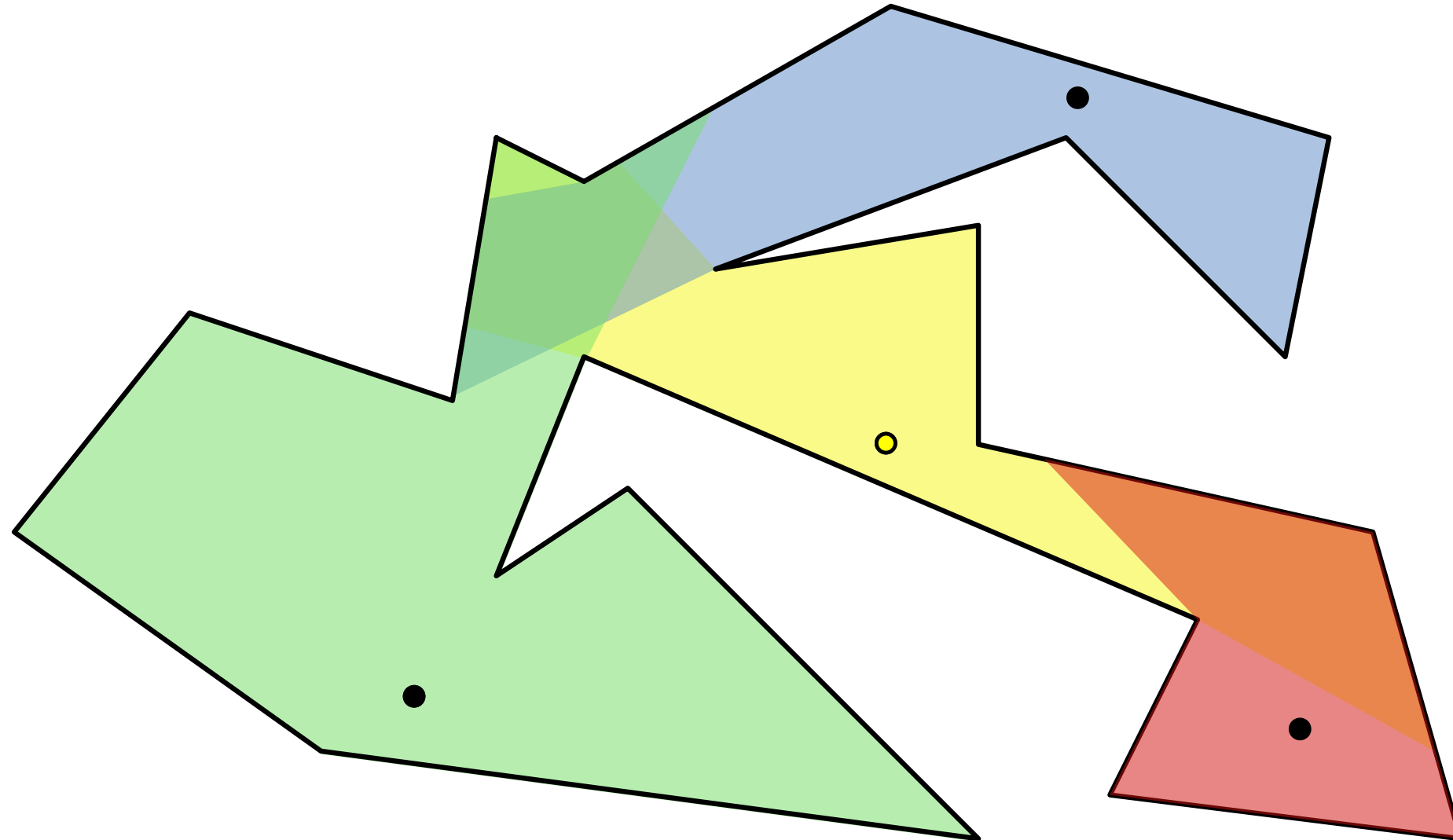
The Art Gallery Problem



The Art Gallery Problem

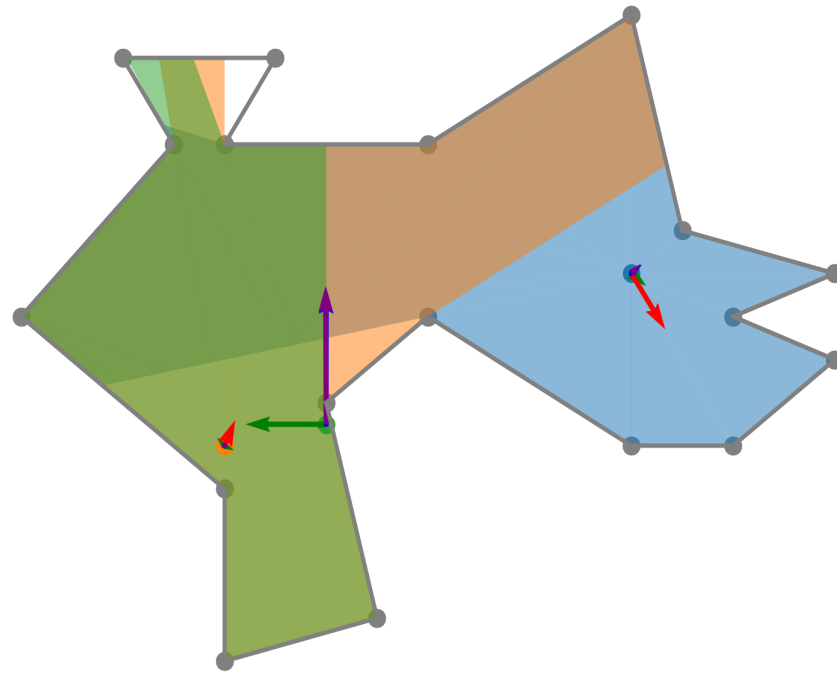


The Art Gallery Problem



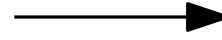
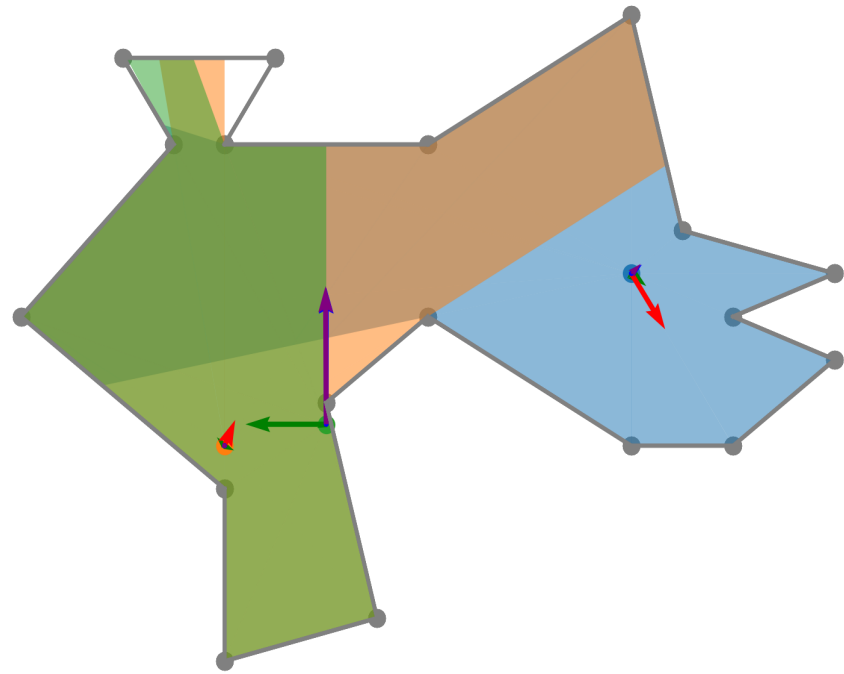
The Art Gallery Problem

Gradient Computation for Iteration #0

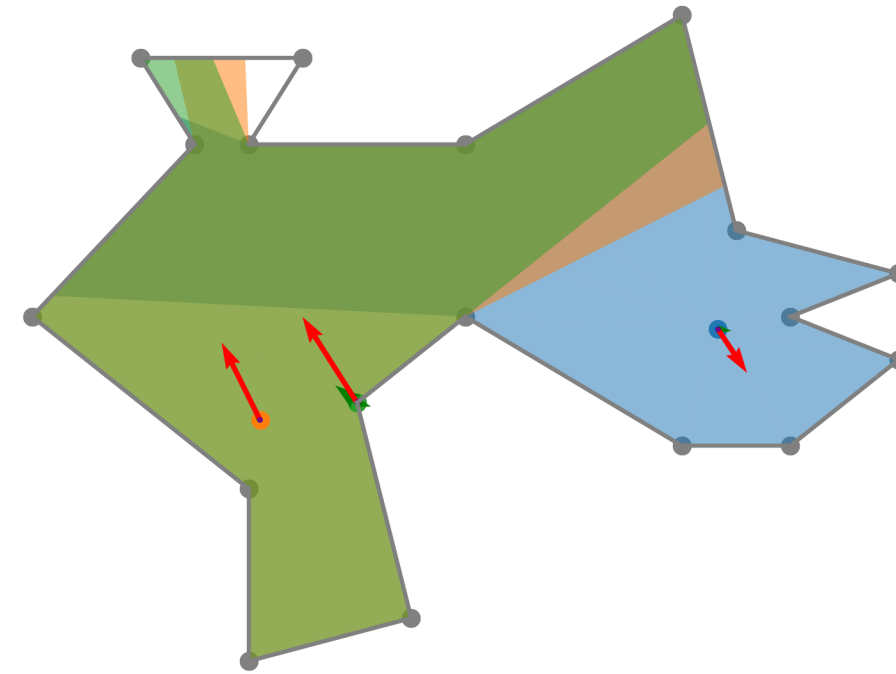


The Art Gallery Problem

Gradient Computation for Iteration #0

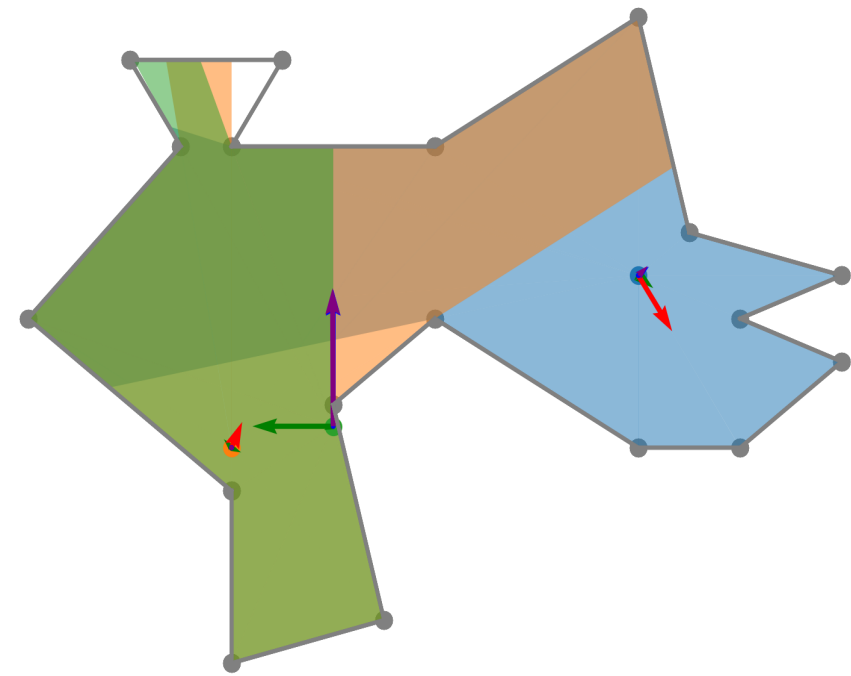


Gradient Computation for Iteration #1

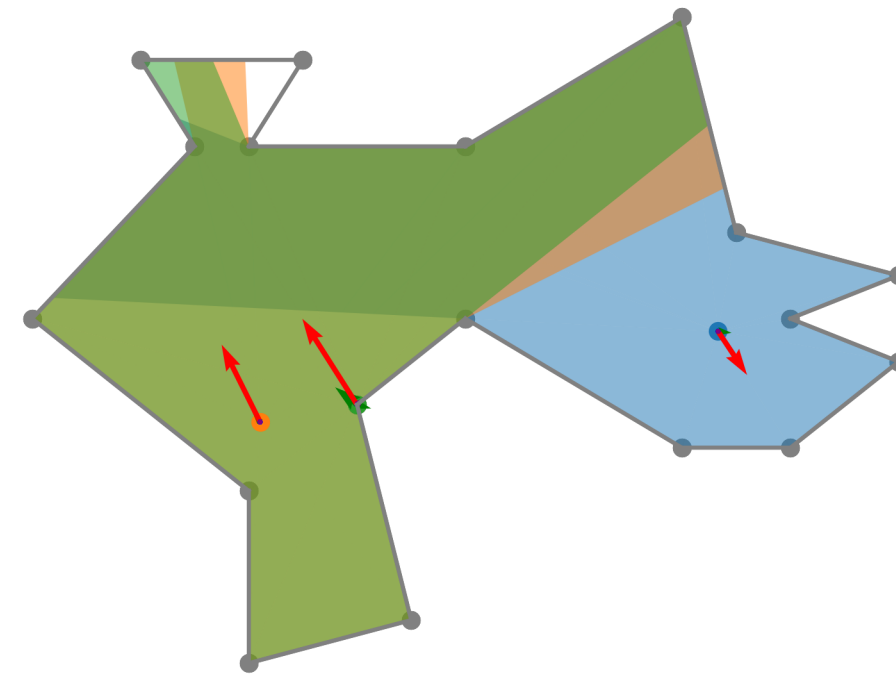


The Art Gallery Problem

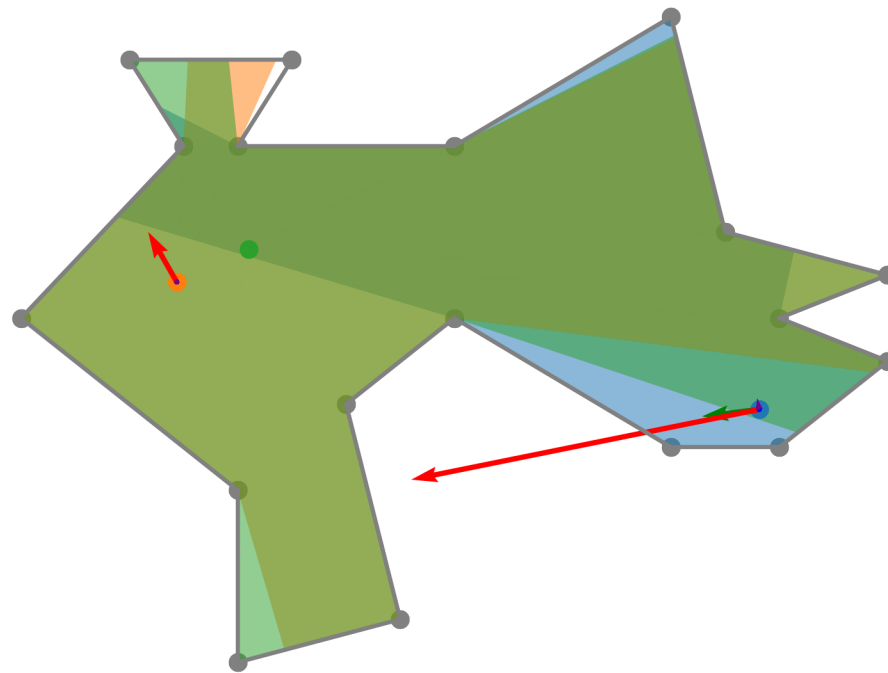
Gradient Computation for Iteration #0



Gradient Computation for Iteration #1

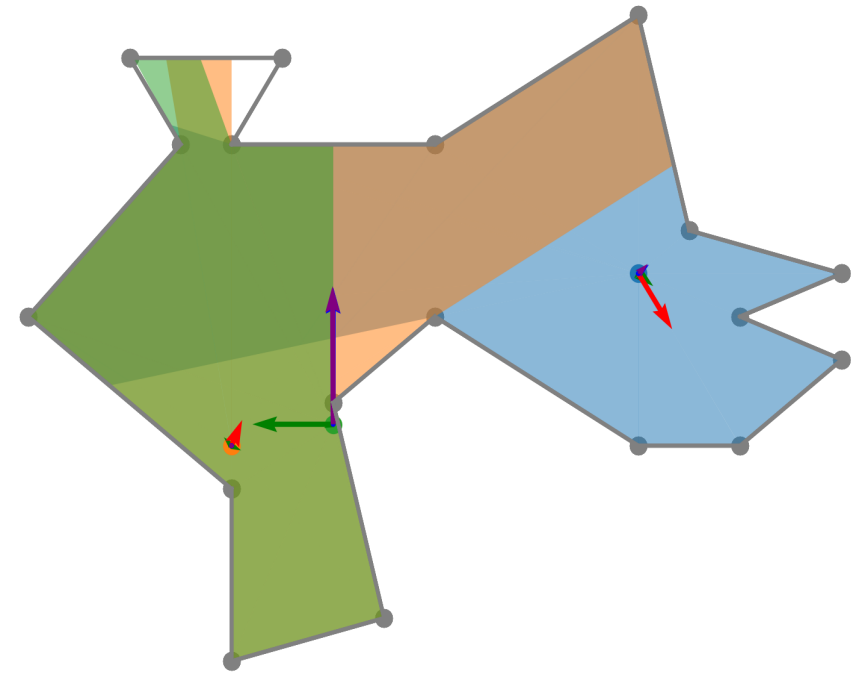


Gradient Computation for Iteration #3

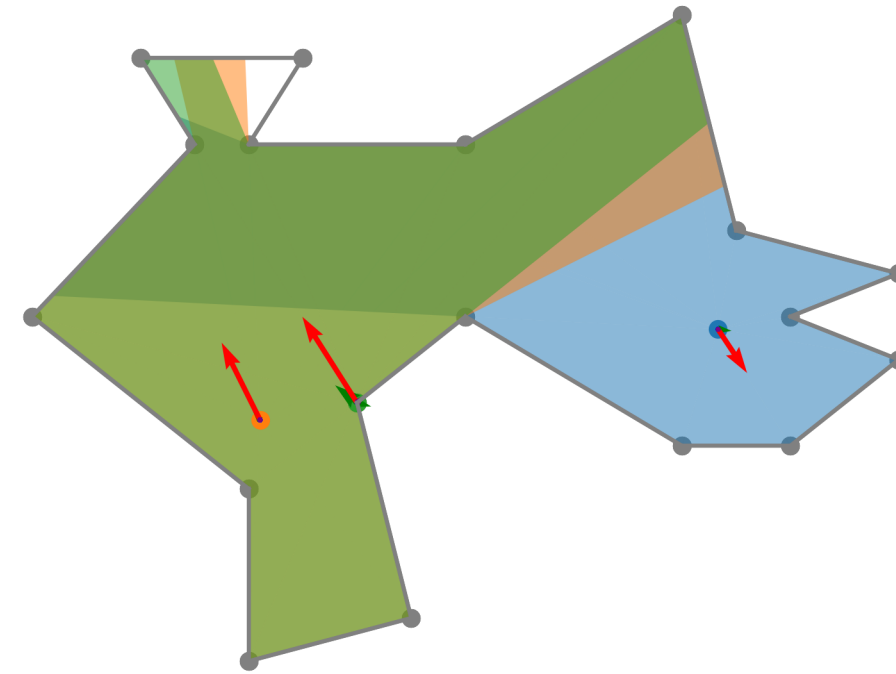


The Art Gallery Problem

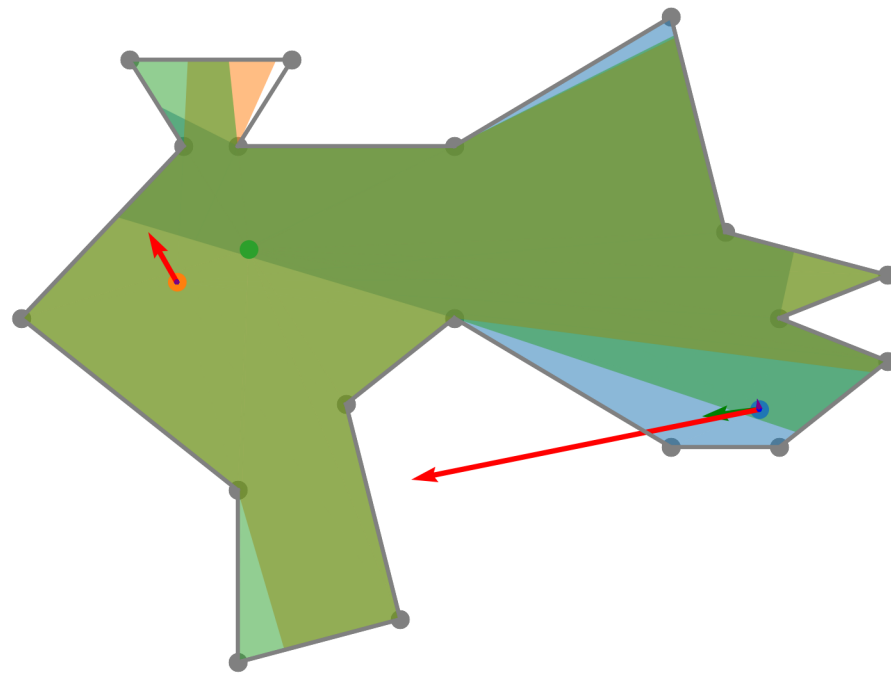
Gradient Computation for Iteration #0



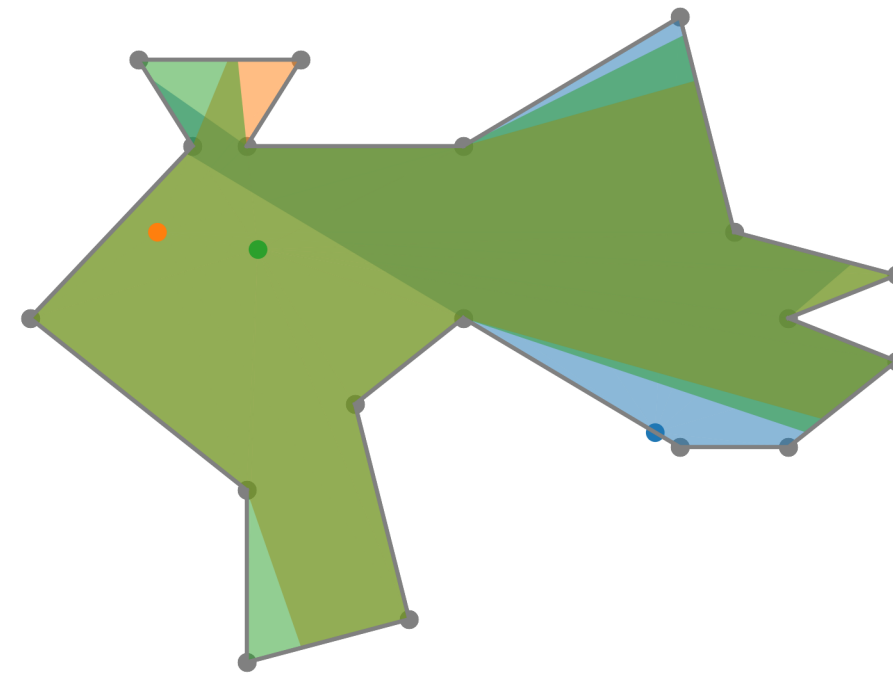
Gradient Computation for Iteration #1



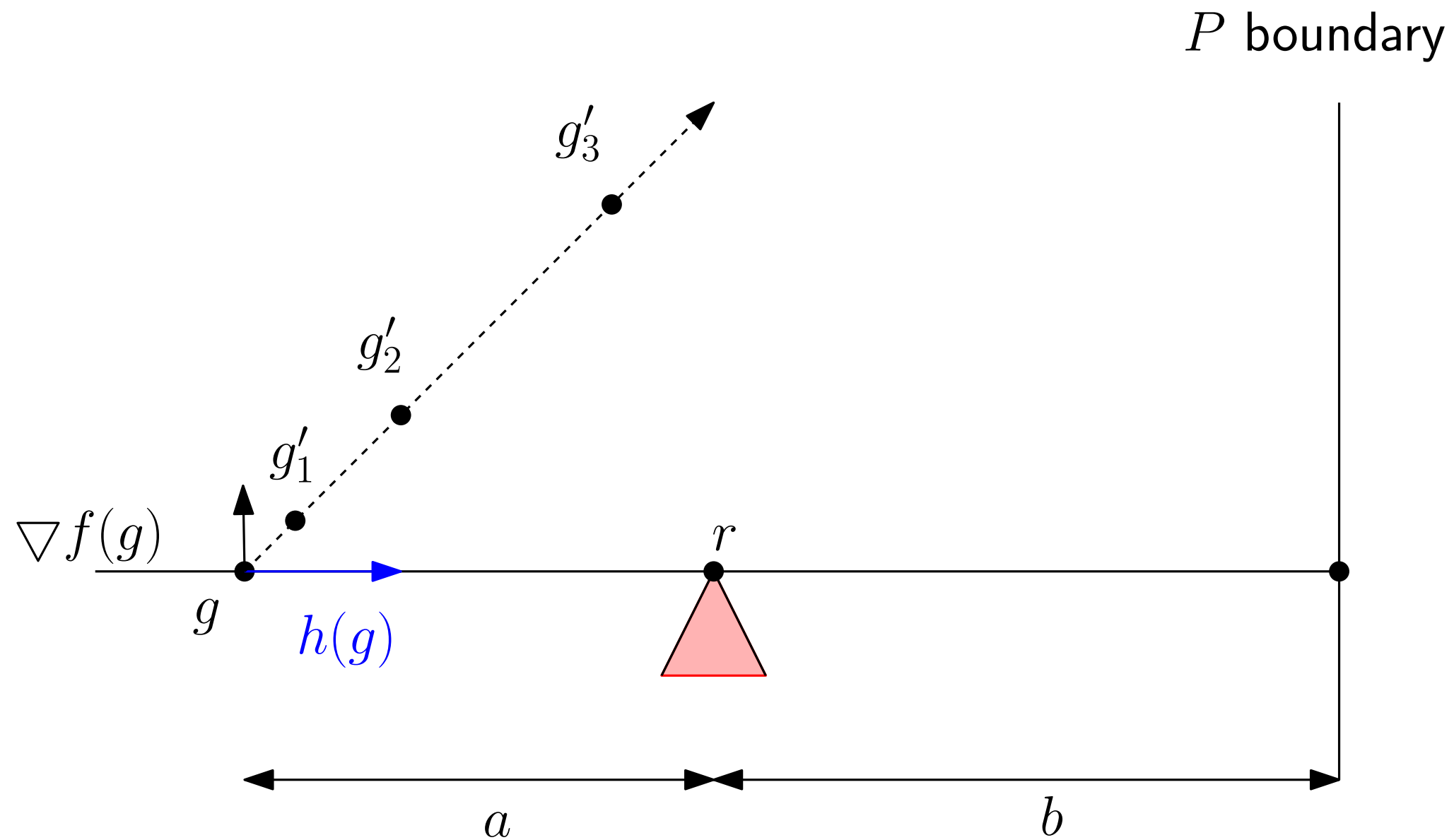
Gradient Computation for Iteration #3



Gradient Computation for Iteration #4

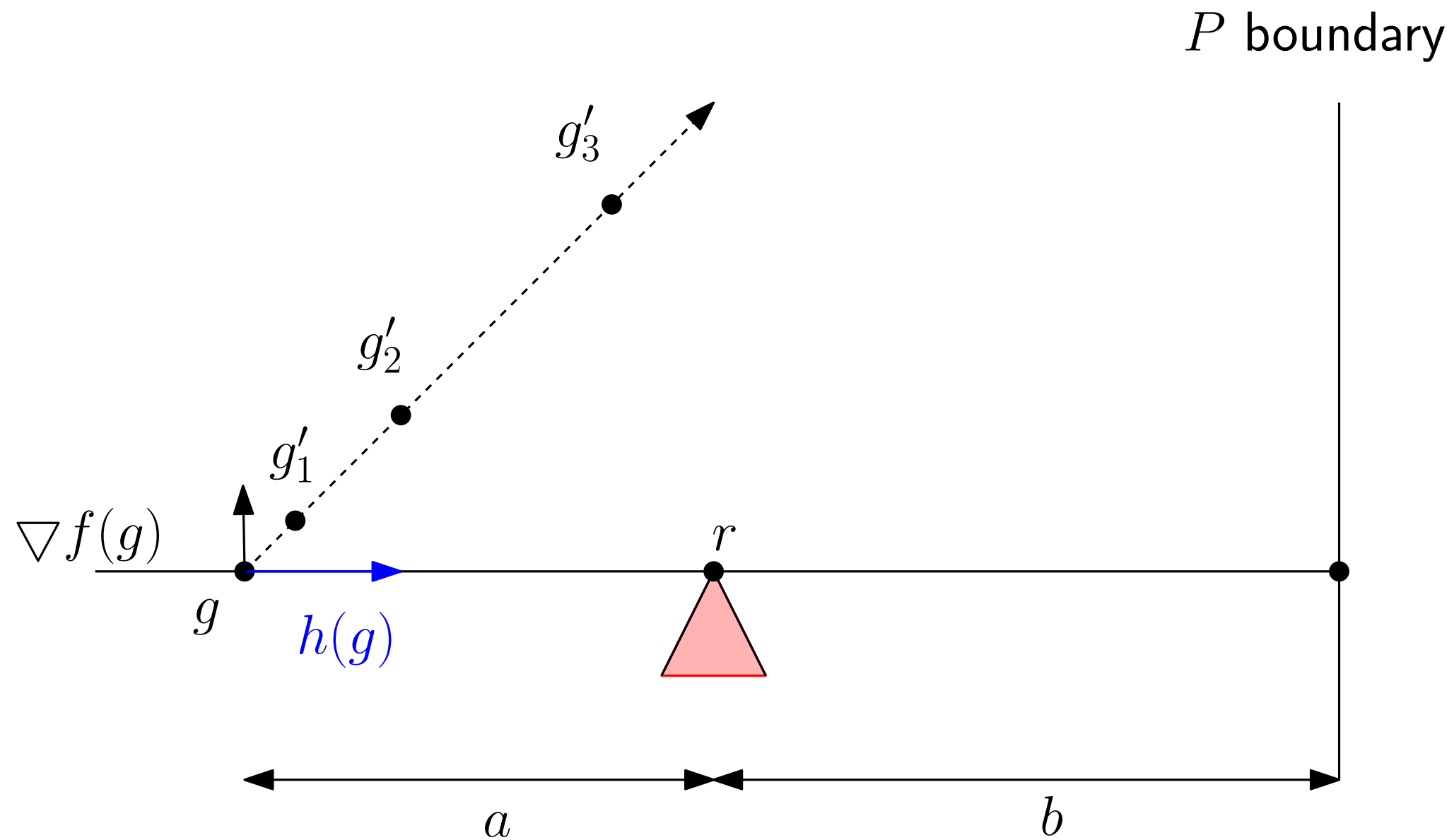


Heuristics: Line Search



...and more

Heuristics: Line Search



...and more

Follow-up

use my code (or not) as a starting point to...

...improve the algorithm's robustness, performance and scalability

...implement other heuristics (so many more ideas!)

...test the algorithm on larger polygons with more guards

...solve bugs

