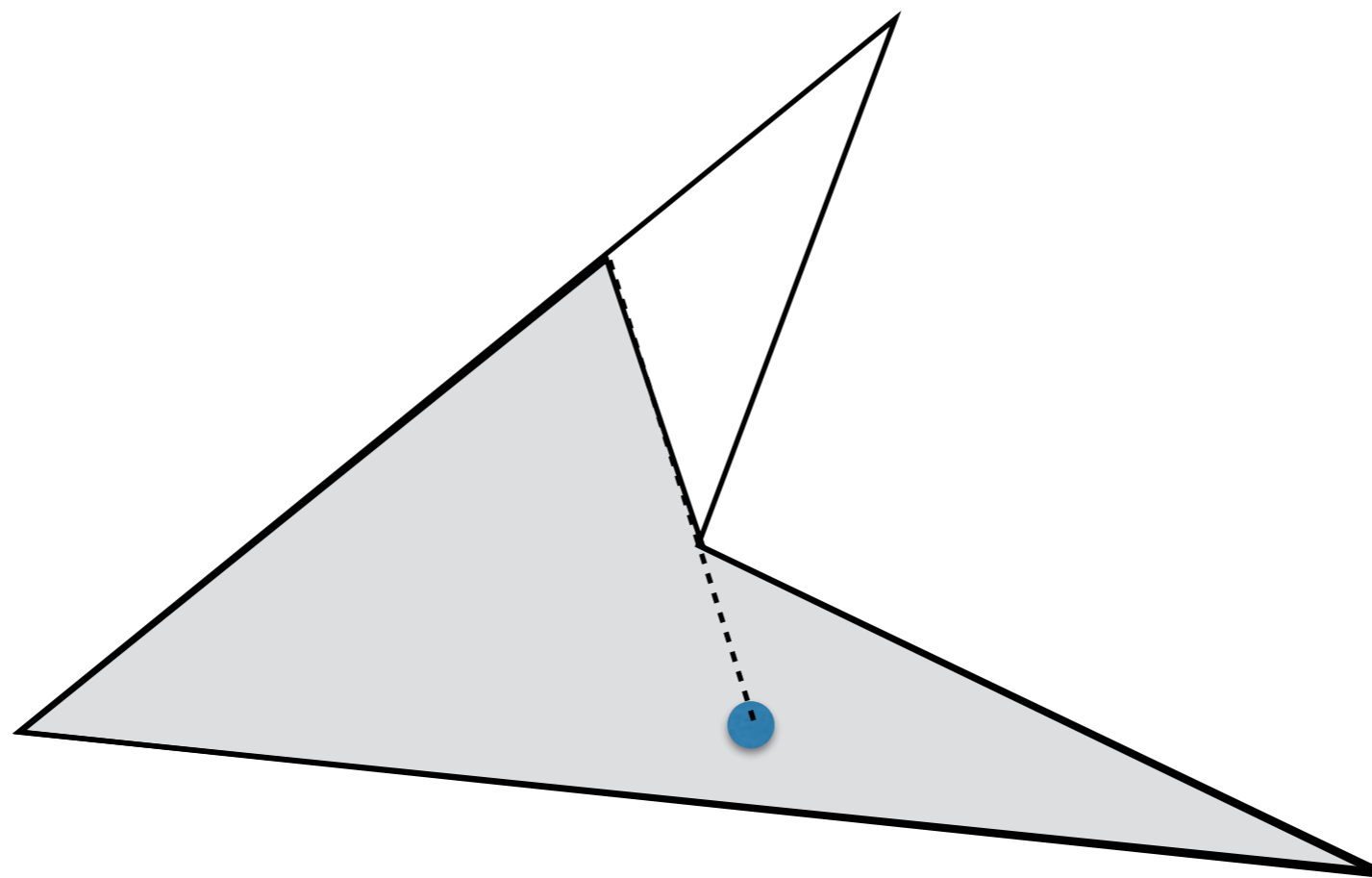


# Computing the visible polygon (VP)

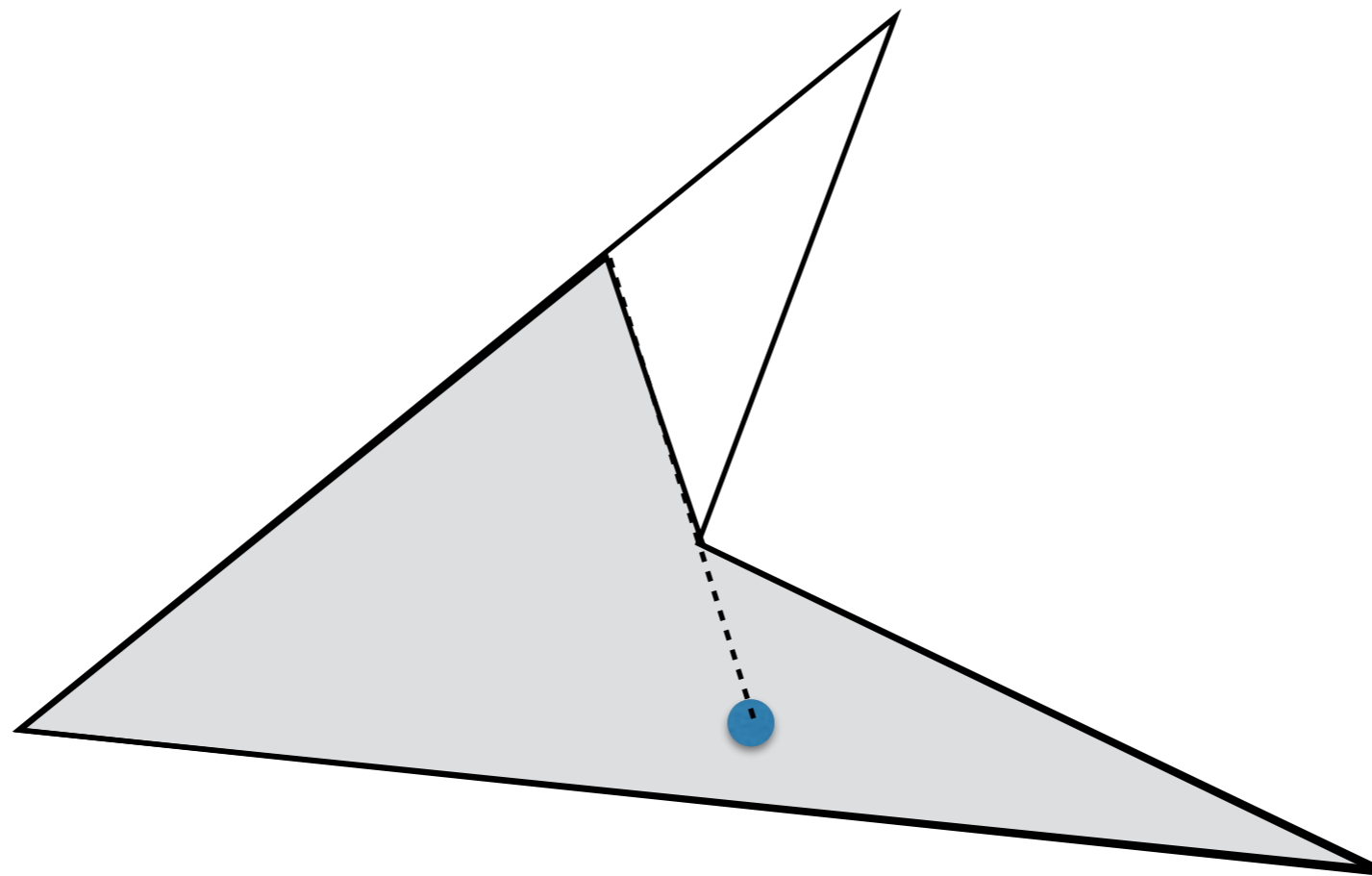


# Computing the visible polygon (VP)

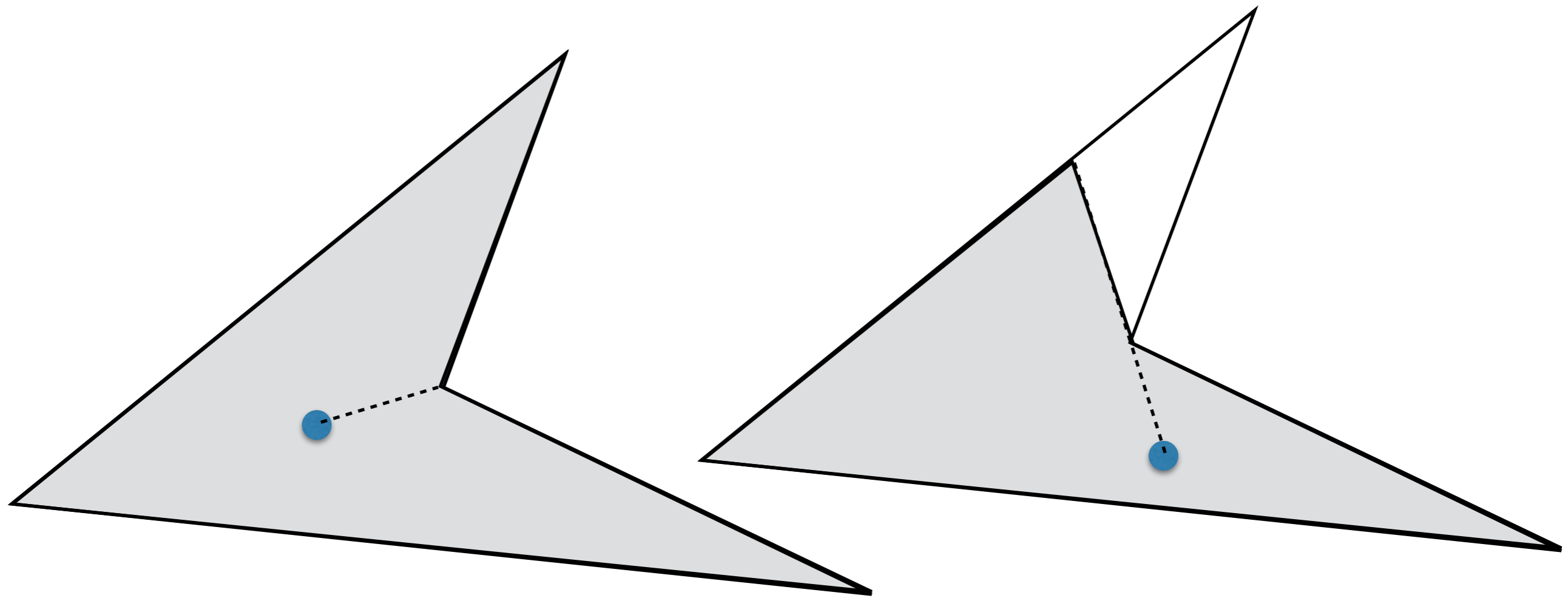
Towards an approach:

1. For each vertex  $v$  of the polygon, determine whether  $v$  is visible or not.
2. Shoot rays through some vertices. For each ray, find its first intersection with the boundary of the polygon.
3. The visible polygon consists of the visible vertices, plus the intersection points of rays. Interleave them to get the boundary of the visible polygon in order.

Which vertices to shoot ray through?

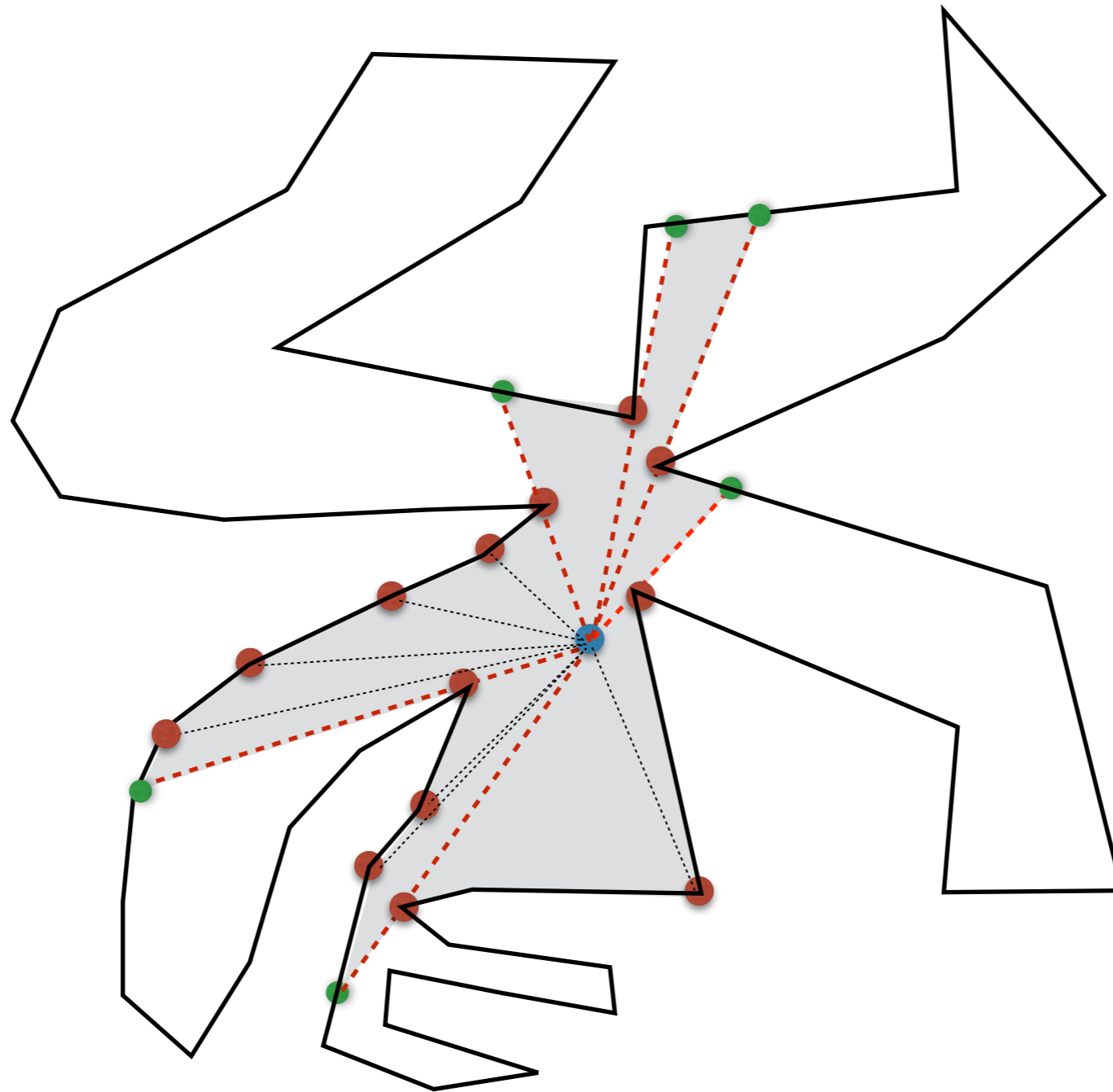


Which vertices to shoot ray through?



Through reflex vertices, but not all reflex vertices.

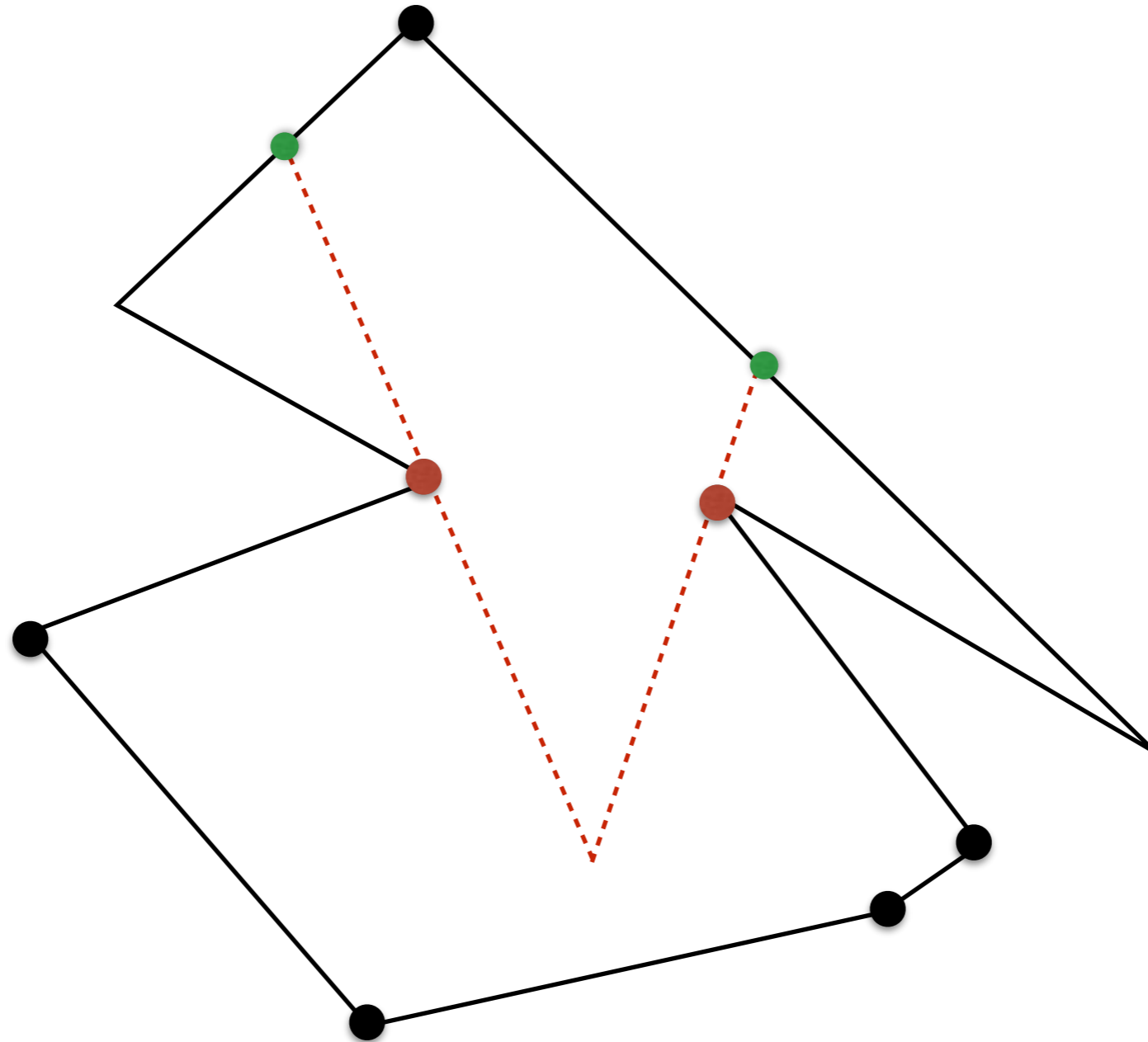
# Ordering the points on the boundary of the VP



Observations:

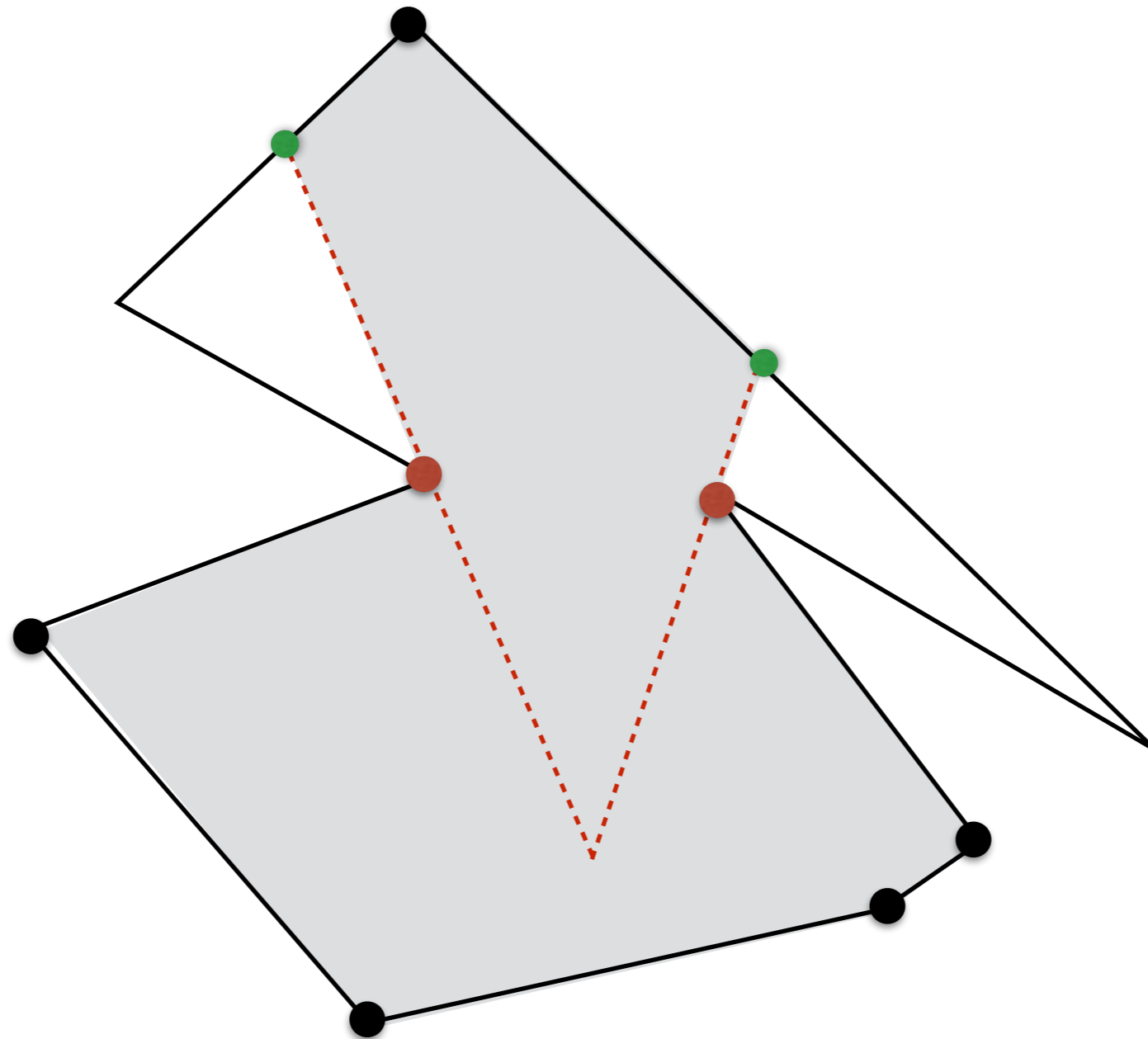
- Every point on the boundary of VP is visible
- The boundary cannot contain cusps. As we walk along the boundary of VP we see the vertices in radial order

# Ordering the points on the boundary of the VP



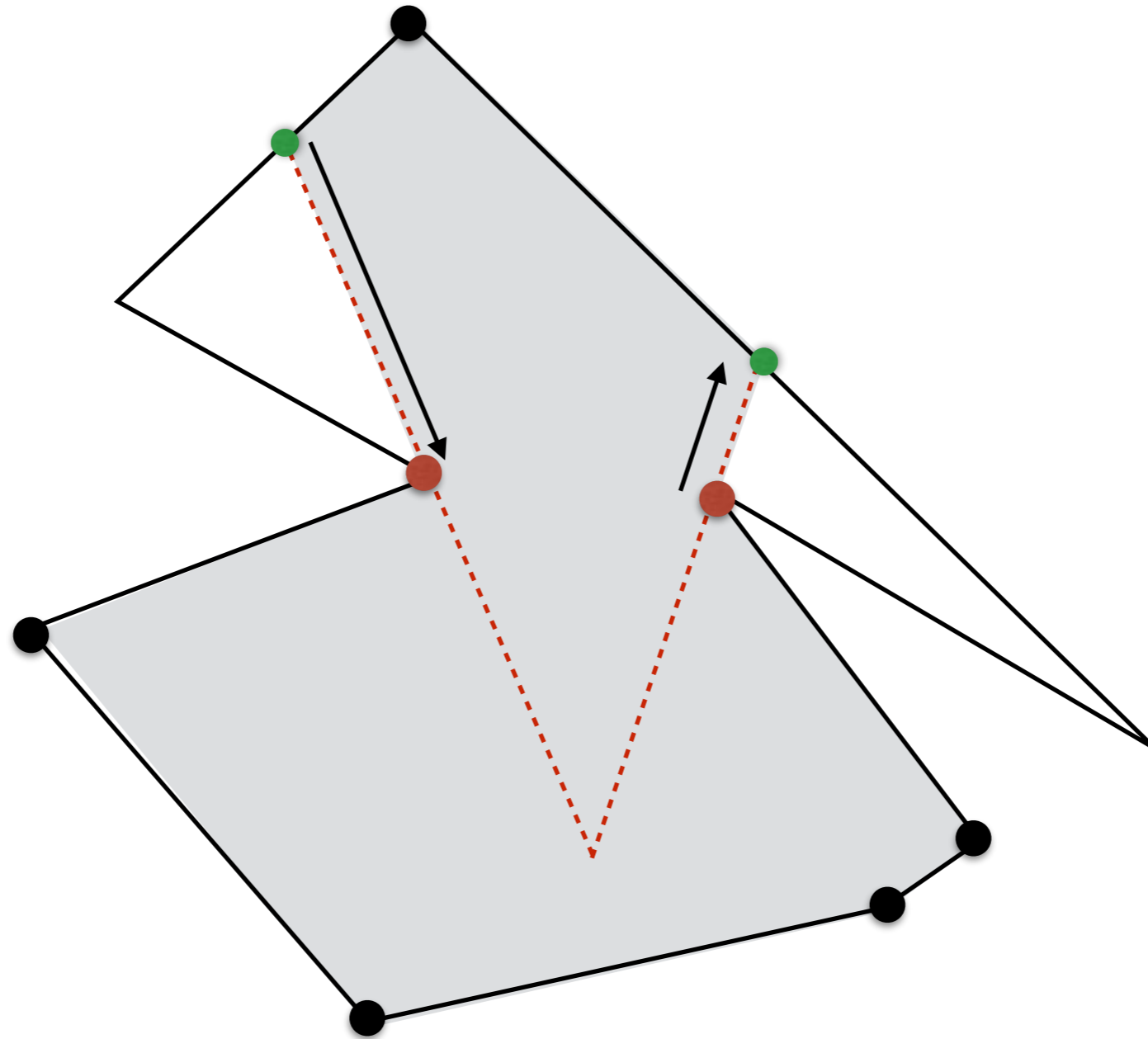
How to order vertices of same radial angle?

# Ordering the points on the boundary of the VP



How to order vertices of same radial angle?

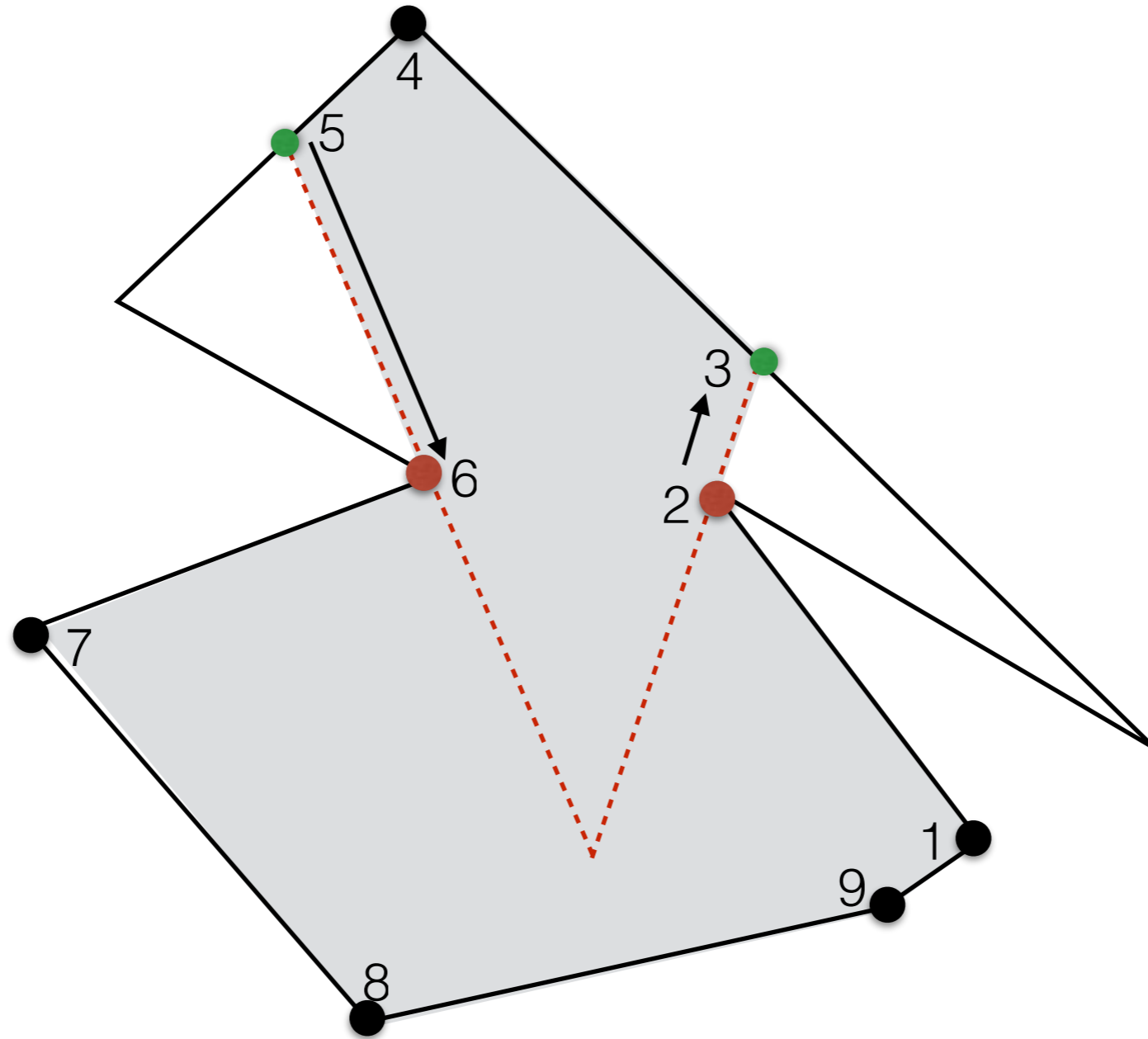
# Ordering the points on the boundary of the VP



How to order vertices of same radial angle?



# Ordering the points on the boundary of the VP



How to order vertices of same radial angle?