Fundamental geometric primitives
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- (signed) area of a triangle
- area of a polygon (convex or non-convex)
- orientation
  - point is left of line
  - collinearity: point is on line
  - betweenness: point a is on line and between points a and b
- segment intersection
  - proper and improper
- point in polygon
Techniques

- **Incremental construction**
  - convex hull
  - Delaunay triangulation
  - terrain simplification

- **Divide-and-conquer**
  - convex hull
  - closest pair of points

- **Line/plane sweeping**
  - rectangle intersection
  - line segment intersections
  - red-blue line segment intersection