

Mid-term Info

- Quick answer questions

$5 \times 4 = 20$ pts

- What does it mean that a polygon is convex
- Give a condition for 3 points to be collinear
- questions about turns (left, right)

- run algorithm on an input

$4 \text{ pr.} \times 20 \text{ pts} = 80 \text{ pts}$

- locus method for how many points in a query rectangle
- point inside/outside of simple/convex/monotone polygon
- slab method for point location in planar subdiv. no stack
- chain method for — " —
- DCEL (including P1 or HW2)
- 2D binary search tree and its use in range-searching problem (report case)
- convex hull algorithms

* gift wrapping

* Quick-hull

(no incremental)

* Graham scan

* divide & conquer

(no application in statistic)

- diameter of points

HW2 (P3)

HW1 (P1, P2)

HW2 (P2)

- Solve a new problem using techniques learned in class
 $1 \times 20 = 20$ pts

- Demonstrate some algorithmic fact about geometric objects (algorithmic/geometric thinking)
 $1 \times 20 = 20$ pts

convex polygons
no stack