

# Finding Intersection area

## The whole report

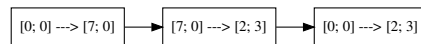
Evteev Denis

3 ноября 2019 г.

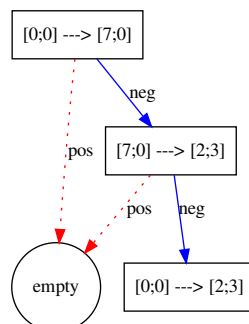
**Input data :**  $\boxed{0 \ 0 \ 2 \ 3 \ 7 \ 0 \ -1 \ -2 \ 5 \ 4 \ 4 \ 1}$

## 1 First polygon description

- Initial vertexes' coords of the First polygon :  $\boxed{(0, 0) \ (2, 3) \ (7, 0)}$
- The right directed edges of the First polygon :

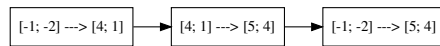


- BSPTree representation of the First polygon :

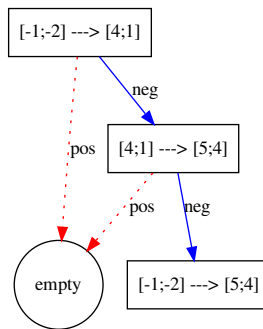


## 2 Second polygon description

- Initial vertexes' coords of the Second polygon :  $(-1, -2) (5, 4) (4, 1)$
- The right directed edges of the Second polygon :

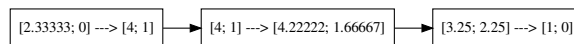


- BSPTree representation of the First polygon :

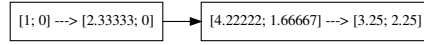


## 3 Finding common lines :

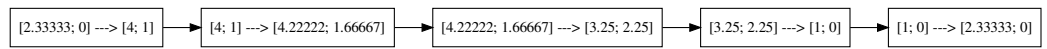
- The second polygon's line segments that lie within the first one



- The first polygon's line segments that lie within the second one



- Common line segments in counterclockwise order



intersection area is equal to : 3.30556