Note: Block-based Half-Space Triangle Rasterization

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#### Edge function and barycenteric interpolation[1]



* If the vertices , , are given in counterclockwise order, then

“ is inside the triangle ”

is equivalent to

* And it can be described as:

(1)

(2)

(3)

* Then, the interpolation coefficients are the followings:

(4) (5)

(6)

#### Block-based



* For the four corner of a block, there are three cases:
  + every corner of the block is outside the triangle.
  + every corner of the block is inside the triangle.
  + the block overlaps the triangle.
* If only the is considered, for the every corner of a block:
  + outside ↔ all
  + inside ↔ all
  + overlap ↔ some corner , other corner
* The same as , .
* On this basis, the pseudo code is the following:



#### References

[1] Mileff P , K Nehéz , Dudra J . *Accelerated Half-Space Triangle*

*Rasterization*[J]. Acta Polytechnica Hungarica, 2015, 12(7):2015-2217.