
Subject: Re: Is a point in a 4 vertex polygon?

Posted by [David Kastrup](#) on Wed, 17 Feb 1999 08:00:00 GMT

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Nando Iavarone <f.iavarone@acsys.it> writes:

- > Thanks all.
- > I found another one algorithm.
- > It uses the vectorial product properties to check
- > if a point is above or below a line.

Presuming that you just do the cross product (which is just a determinant, really) of vector $a-M$ and $b-a$ to check whether M lies to the left of $a-b$, you should be aware that this algorithm, though fast, works only with convex polygons.

If you draw a quadrilateral that is like an arrow tip, or like a delta plane (namely two sharp triangles pointing backwards), then a point in one of the tips will fail the criterion.

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