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Subject: Re: Finding a points inside polygon  
Posted by [James Kuyper](#) on Thu, 24 Oct 2002 14:47:38 GMT  
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Gunho Sohn wrote:

>  
> Dear All,  
>  
> I have a problem to determine whether a point (x,y) is inside the polygon.  
> Simply I've used IDLanROI::ContainsPoints method in my code. However, it  
> seems to make a serious problem. Please, check this problem together. I used  
> following polygons and point  
>  
> polygon vertices (vx,vy):  
> vx=[35.859278 55.591451 155.00000 155.00000]  
> vy=[0.00000000 0.00000000 19.279154 23.105984]  
>  
> point (x,y):  
> x=122.87897 y=13.049367  
>  
> When I simply coded this as follows, it printes as 0 which means this point  
> is located outside of polygon. But, it is not!

```
IDL> vx = [35.859278, 55.591451, 155.00000, 155.00000, 35.859278]  
IDL> vy = [0.00000000, 0.00000000, 19.279154, 23.105984, 0.000000]
```

I added the extra point on the end, to close the polygon. ContainsPoint doesn't need that closure, but the follow commands do:

```
IDL> plot,vx,vy  
IDL> plots,[122.87897],[13.049367]
```

That's ambiguous - the point seems to be right on the edge.

```
IDL> plot,vx,vy,xrange=[122,123],yrange=[13,14]  
IDL> plots,[122.87897],[13.049367],psym=1
```

That doesn't help; it's still ambiguous.

```
IDL> plot,vx,vy,xrange=[122.87,122.88],yrange=[13.04,13.05]  
IDL> plots,[122.87897],[13.049367]
```

Finally! That looks to me like the point is slightly, but definitely, outside of the polygon. ContainsPoint is apparantly correct.

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