
Subject: Optimization "AMOEBA"

Posted by [Nicki](#) on Fri, 18 Sep 2009 09:53:29 GMT

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Hey!

I need some help with amoeba (i'm a total IDL beginner...). For a start (get to understand how it works) I want to solve a pretty simple, 1-dim. problem. I'm having a parabola $-x^2+4x+9$ and I want to get the maximum with the help of AMOEBA. How do I do that? (Let's say starting point $P0=5$ and scale is 4).

This is what it looks like now:

```
FUNCTION FUNC, P
```

```
x=P[0]
```

```
y=-x^2.+4.*x+5.
```

```
ydes=9.1
```

```
RETURN, MIN(ydes^2-y^2)
```

```
END
```

```
R=AMOEBA(1.0e-1, SCALE=5, P0=0.05, FUNCTION_VALUE=fval)
```

```
PRINT, 'x_Value:', r, $  
'error:', fval[0]
```

```
END
```

As a result i get for the x_value -1 and for the error - Inf.... But why?! I mean the maximum of the function is at $x=2$ and this is within the scale...

Maybe somebody can give me some help
