

22S:166 Computing in Statistics
R functions for root-finding and optimization
Lecture 11a
October 12, 2007

uniroot

uniroot package:stats R Documentation

One Dimensional Root (Zero) Finding

Description:

The function 'uniroot' searches the interval from 'lower' to 'upper' for a root (i.e., zero) of the function 'f' with respect to its first argument.

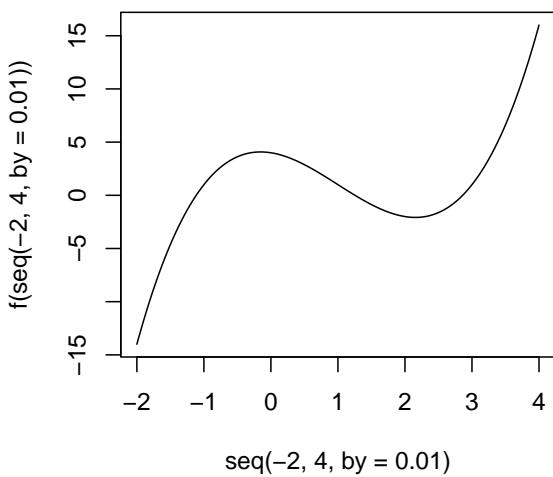
Usage:

```
uniroot(f, interval, lower = min(interval), upper = max(interval),  
        tol = .Machine$double.eps^0.25, maxiter = 1000, ...)
```

1

2

Example



```
> f <- function(x) {x^3 - 3*x^2 - x + 4}
> plot(seq(-2,4,by=0.01), f(seq(-2,4,by=0.01)),type="l")
> uniroot(f=f,c(-2,4))
$root
[1] -1.114907

$f.root
[1] 9.607438e-06

$iter
[1] 9

$estim.prec
[1] 6.103516e-05
```

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