

This document illustrates how to use the exclamation mark (!), or any other character, instead of vertical bar as the variable name delimiter. This may be useful if you are typesetting programs which use a lot of vertical bars.

$$\left| \frac{\partial \varphi(X)}{\partial g} \right| = \max_{i \in R(X)} \nabla f_i(X) g^T$$

Testing!

$$\text{foo_bar} = x + y$$

$$\text{foo}_{\text{bar}} = x + y$$

Note that the `bar` subscript is not at a smaller size. If you want a small subscript, write:

$$\text{foo}_{\text{bar}} = x + y$$

```

choose chooseX0;
X := X0;
do determine |R(X)|
  determine |G(X)|
  determine |foo_bar(X)|
  determine |Z * |
  if |Z * | = 0 then exit fi
  determine direction of steepest descent  $g = -|Z * | / \| |Z * | \|$ 
  determine  $\alpha > 0$ , for which  $\varphi(X + \alpha g)$  is minimum
  X := X +  $\alpha g$ 
od
```