

# Wikimath

## 0.1 writing wikimath expressions

Here we define a string of text.

```
> x <- "V_c /F (L * h^-1 ) ~theta_1 *(WT/70)^theta_2"
```

## 0.2 extracting and supressing elements

Now we try x as a column name for a data frame.

```
> d <- data.frame(subject=1,x=2)
> names(d)[2] <- nospace(lhs(noUnits(x)))
> d
```

```
  subject V_c/F
1        1    2
```

```
> justUnits(x)
```

```
[1] "L * h^-1 "
```

## 0.3 identifying related parameters

What theta is primarily associated with this equation?

```
> tos(x)
```

```
[1] "THETA1"
```

```
> text2decimal(tos(x))
```

```
[1] 1
```

## 0.4 rendering in a table

Next we try it in a latex table.

```
> library(Hmisc)
> tex <- capture.output(latex(
+   file='',
+   title='',
+   where="!htbp",
+   rowname=NULL,
+   colheads='model',
+   data.frame(x=wiki2latex(noUnits(x)))
+ ))
> writeLines(tex)
```

model
$V_c/F \sim \theta_1 \cdot (WT/70)^{\theta_2}$

## 0.5 rendering in a figure

Finally we try it in a figure.

```
> library(lattice)
> print(densityplot(
+   ~cl,
+   data.frame(cl=rnorm(1000,mean=1)),
+   xlab=parse(text=wiki2plotmath(noUnits(x)))
+ ))
> file.remove('Rplots.pdf')
```

```
[1] TRUE
```

