

# Using Latex in R

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## Introduction

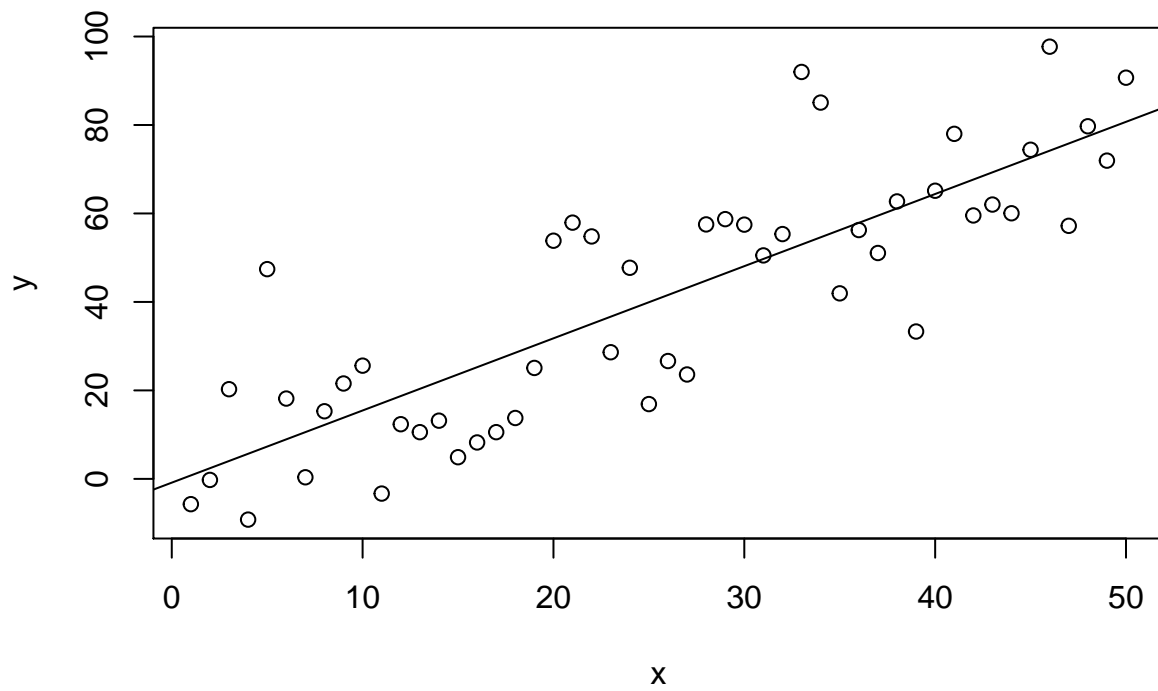
First let's simulate some data.

```
n <- 50
x <- seq(1, n)
a.true <- 3
b.true <- 1.5
y.true <- a.true + b.true * x
s.true <- 17.3
y <- y.true + s.true * rnorm(n)
```

Before we estimate the linear expression  $y_t = x_t^\top \beta + \varepsilon_t$  using the `lm` command in R.

```
##
## Call:
## lm(formula = y ~ x)
##
## Residuals:
##      Min       1Q   Median       3Q      Max
## -29.451 -10.710  -2.131   9.843  40.112
##
## Coefficients:
##              Estimate Std. Error t value Pr(>|t|)
## (Intercept)  -0.8541     4.6350  -0.184   0.855
## x              1.6313     0.1582  10.312 9.17e-14 ***
## ---
## Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 16.14 on 48 degrees of freedom
## Multiple R-squared:  0.689, Adjusted R-squared:  0.6825
## F-statistic: 106.3 on 1 and 48 DF, p-value: 9.166e-14
```

A figure is then produced by the following code:



For more details on using R Markdown see <http://rmarkdown.rstudio.com>.