Introducing R

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Plan for today

- 1. example
- 2. content
- 3. another example

An Equation

$$y=mx+b$$
 $lpha+eta$

Some code

```
summary(lm(Sepal.Length ~ Species, data = iris))
##
## Call:
## lm(formula = Sepal.Length ~ Species, data = iris)
##
## Residuals:
##
      Min
               10 Median
                              30
                                     Max
## -1.6880 -0.3285 -0.0060 0.3120 1.3120
##
## Coefficients:
##
                    Estimate Std. Error t value Pr(>|t|)
                      5.0060
                                0.0728 68.762 < 2e-16 ***
## (Intercept)
## Speciesversicolor
                     0.9300
                                0.1030 9.033 8.77e-16 ***
## Speciesvirginica
                                0.1030 15.366 < 2e-16 ***
                     1.5820
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
##
## Residual standard error: 0.5148 on 147 degrees of freedom
## Multiple R-squared: 0.6187,
                                Adjusted R-squared: 0.6135
## F-statistic: 119.3 on 2 and 147 DF, p-value: < 2.2e-16
```

Viewing a data.frame

```
Sepal.Length Sepal.Width Petal.Length Petal.Width Species
##
## 1
              5.1
                          3.5
                                       1.4
                                                   0.2 setosa
## 2
              4.9
                          3.0
                                                   0.2 setosa
                                       1.4
## 3
              4.7
                          3.2
                                       1.3
                                                   0.2 setosa
## 4
              4.6
                          3.1
                                       1.5
                                                   0.2 setosa
## 5
              5.0
                          3.6
                                       1.4
                                                   0.2 setosa
## 6
              5.4
                          3.9
                                       1.7
                                                   0.4 setosa
```