choices-prep

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Introduction to conditional statements

```
"aang" == "aang"
```

```
## [1] TRUE
```

```
"aang" == "kora" #checking  conditionalstatements
```

```
## [1] FALSE
```

```
"aang" != "kora"
```

```
## [1] TRUE
```

```
"zuka" %in% c("aang", "toph", "katara")
```

```
## [1] FALSE
```

```
"zuka" %in% c("aang", "toph", "katara", "zuka")
```

```
## [1] TRUE
```

```
5 > 2 & 6 >= 10 #and if one is false comes out false
```

```
## [1] FALSE
```

```
5 > 2 | 6 >= 10 # or if one is true comes out true
```

```
## [1] TRUE
```

```
c(1,1,2,3,1) == 1
```

```
## [1]  TRUE  TRUE FALSE FALSE  TRUE
```

```
site = c( 'a','b','c','d')
state = c('FL', 'FL', 'GA', 'AL')
state == 'FL '
```

```
## [1] FALSE FALSE FALSE FALSE
```

```
site[state == 'FL']
```

```
## [1] "a" "b"
```

```
site[c(TRUE, TRUE, FALSE, FALSE)]
```

```
## [1] "a" "b"
```

introduction to if statements in R

```
#if(the conditional statement is TRUE){
  #do something
#}
x = 4
if(x >5){
  x = x^2
} # not a function everything in global environment
veg_type = "tree"
volume = 16.08
if(veg_type == "tree"){
  mass = 2.65 * volume^0.9
} #if it wasn't tree it won't work
```

introduction to else if and else statements in R

```
veg_type = "shrub"
volume = 16.08
if(veg_type == "tree"){
  mass = 2.65 * volume^0.9
} else if (veg_type == "grass"){ #else if would skip to this portion if veg_type didn't match condition
  mass = 0.65 * volume^1.2
} else{ #else if above conditons aren't correct
  mass = NA
}
```

Using if/else if/else statements inside of functions in R

```
est_mass = function(volume, veg_type){
 if(veg_type == "tree"){
  mass = 2.65 * volume^0.9
} else if (veg_type == "grass"){
  mass = 0.65 * volume^1.2
} else{
  mass = NA
}
  return(mass)
}
est_mass(1.6, "tree")
```

```
## [1] 4.045329
```

```
est_mass(1.6, "grass")
```

```
## [1] 1.142503
```

```
est_mass(1.6, "shrub") #using function and assigning variable code can be used again
```

```
## [1] NA
```

Introduction to nested if statements in R

```
est_mass = function(volume, veg_type, age){
 if(veg_type == "tree"){
   if (age < 5 ) { #when tree is being checked this line would be run to see if less than 5 line 81 wou
     mass = 1.6 * volume^0.8
   } else{
     mass = 2.65 * volume^0.9
   }
} else if (veg_type == "grass"){
  mass = 0.65 * volume^1.2
} else{
  mass = NA
}
  return(mass)
}
est_mass(1.6, "tree", 4)
```

```
## [1] 2.330322
```

```
est_mass(1.6, "tree", 6)
```

```
## [1] 4.045329
```

```r
est_mass(1.6, "grass")
```

```
## [1] 1.142503
```

```r
est_mass(1.6, "shrub")
```

```
## [1] NA
```