

Creating functions

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Intro to creating functions

Why is it good to create functions - create more columns in a data frame with a specific req creating functions can help you understand and be able to make changes in order to obtain the desired output stay organized copy and pasting is very error prone

```
convert_pounds_to_grams <- function(pounds) {  
  grams = 453.6 * pounds  
  return(grams)  
}
```

```
convert_pounds_to_grams <- function(pounds) {  
  grams= 453.6 * pounds  
  return(grams)  
}  
#convert_pounds_to_grams() #says value is missing  
convert_pounds_to_grams(3.75)
```

```
## [1] 1701
```

```
convert_pounds_to_grams(pounds = 3.75)
```

```
## [1] 1701
```

```
get_mass_from_length_theropoda <- function(length){  
  mass <- 0.73 * length ^ 3.63  
  return(mass)  
}  
get_mass_from_length_theropoda(16) #17150.56
```

```
## [1] 17150.56
```

```
get_mass_from_length <- function(length){  
  mass <- 214.44 * length ^ 1.46  
  return(mass)  
}  
get_mass_from_length(26) #24955.54kg
```

```
## [1] 24955.54
```

```
get_mass_from_length <- function(length, a = 39.9, b = 2.6 ){
  mass <- a * length ^ b
  return(mass)
}
get_mass_from_length(length=22,a = 214.44, b = 1.46)#19554.33
```

```
## [1] 19554.33
```

```
get_mass_from_length <- function(length, a = 39.9, b = 2.6 ){
  mass <- a * length ^ b
  return(mass)
}
get_mass_from_length(length=16) # 53911.93
```

```
## [1] 53911.93
```

Write a function called `convert_kg_to_pounds` that converts kilograms into pounds (pounds = 2.205 * kg). Use that function and your `get_mass_from_length()` function from Default Arguments to estimate the weight, in pounds, of a 12 m long Stegosaurus with $a = 10.95$ and $b = 2.64$ (The estimated a and b values for Stegosauria from Seebacher 2001).

```
get_mass_from_length <- function(length, a = 39.9, b = 2.6 ){
  mass <- a * length ^ b
  return(mass)
}

convert_kg_to_pounds <- function(kg){
  pounds <- 2.205 * kg
  return(pounds)
}

library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##   filter, lag
```

```
## The following objects are masked from 'package:base':
##
##   intersect, setdiff, setequal, union
```

```
weight_in_lbs <- get_mass_from_length(12, 10.95, 2.64) %>%
  convert_kg_to_pounds() #17055.37
weight_in_lbs
```

```
## [1] 17055.37
```

```
convert_kg_to_pounds(5)
```

```
## [1] 11.025
```