Assignment 16.1

5. Problem Statement

• Write a function that to calculate BMI (Body Mass Index):

• BMI for a person is defined as their body mass divided by the square of their height

• The weight is in kilograms and the height in meters or

• (The weight can be in pounds and the height in inches)\* 703

|  |
| --- |
| Answer:  Let us say we have the height and weight of several people. We can add another column to the data frame using the function. |

So we can run multiple lines through custom functions without iterating between the lines.

1. Assumed weight is in pounds and the height in inches

BMI = function(height,weight){

return((weight/(height)^2)\*703)

}

BMI(71,180)

* To calculate for n number of people

BMI = function(height,weight){

return((weight/(height)^2)\*703)

}

H = c(68, 70, 65, 74, 69)

W = c(185, 162, 122,224,154))

People = data.frame(H, W)

People$bmi = BMI(People$H, People$W)

Print(People)

OUTPUT: h w bmi

1 68 185 0.04000865

2 70 162 0.03306122

3 65 122 0.02887574

4 74 224 0.04090577

5 69 154 0.03234615

1. Assumed weight is in kilograms and the height in meters

BMI = function(height,weight){

return(weight/(height)^2)

}

BMI(4,80)

Output is --- 5

* To calculate for n number of people

BMI = function(height,weight){

return(weight/(height)^2)

}

H = c(5, 6, 7, 8, 9)

W = c(185, 162, 122,224,154))

People = data.frame(H, W)

People$bmi = BMI(People$H, People$W)

Print(People)

OUTPUT –

H W bmi

1 5 185 7.400000

2 6 162 4.500000

3 7 122 2.489796

4 8 224 3.500000

5 9 154 1.901235