Alejandro Sanchez HW 1

I used a random number generator to do the "dice rolling" for me and the results that I got were interesting. For some reason the number 4 was the most common number that I was getting whenever I rolled the dice twenty times. Ideally the probabilities of rolling a six is 1/6 and I couldn’t think of a way to roll a six more often so I decided to go with trying to roll a six less often by expanding the interval from [1:6] to [1:10]. I think that in order for something to be considered more or less often it has to be compared to a base so I used the base probability of rolling a six on a fair six-sided die of 1/6(16.7%) as my base. Keeping that in mind when I expanded my interval to [1:10] and later to [1:8] it should have been harder to “roll” a six since the probabilities of rolling a six sank to 1/10(10%) and 1/8(12.5%) respectively. As expected, when I rolled a D10 the number of times I got a six were very little. I rolled the D10 twenty times on two separate occasions and on one of the occasions I only managed to roll a six once and the second time around, I was not able to roll a six. When I switched to an interval of [1:8] I was able to roll a six with more ease. I was even able to roll a six more often that was the case on a regular six-sided die. I tried to write code in R to try and simulate dice roll on my R Studio program. I typed in:

1:6

[1] 1 2 3 4 5 6

> die <- 1:6

> die

[1] 1 2 3 4 5 6

> sample (x=die, size=1)

dice.roll <- sample (x=die, size=1)

Every time I ran this code I kept getting the same result so I have no idea if what I had was right or if there was an error somewhere.