Question 1) According to my results it seems like the smaller the number of roll is the larger the difference between the amount of times each face gets rolled. But as the number of rolls increases it seems like the numbers start to normalize thus having numbers which are close in proximity as the probability of each face. This follows the equation of 1/k, in which k is the number of face (1/6=0.16).

Question2) This is certainly a surprising result which was around 7.9%. This can be explained though using the (combinatory formula) divided by2^100= 8%.

Question 3) If these values were graphed it would show a normal distribution. As you are further from the midpoint, the lower the probability because there are less number combinations to give to equal the given number. Furthermore, as you come closer to the midpoint (in this case being 7) the probability increases till it reached the max, which is around 0.167.

Question 4) I would stand on 18 as the probability of me busting after that substantially goes up after that. Furthermore, the difference between 21 and 18 is low therefore decreasing my chance of loosing with respect to the dealer.

Question 5)I got around 20% which seems reasonable if you consider average three times (1,0 ,-1) for both the loose and win situation. Then your conditions would be the following: Loose-low, loose-high, loose-average x3, win-high, win-averagex3, win-low. Since you’re considering only the situation of win-high and loose-low you would have 2/10= 20%. It seems like betting low would increase my win since the betting strategy only works 20% of the time. Therefore I would loose less, by betting low often, and betting high only when the count outcome is more than 2.