Acitvity - Lab 10

1. Generate 1000 uniform pseudorandom variates using the runif() function.
    - compute average and variance
    - compare your results with true mean and variance
2. Use the round() function together with runif() to generate 1000 pseudo-random integers which take values from 1 through 10. Use the table() function to check whether the observed frequencies for each value are close to what you expect.
3. Use sample() function to generate 1000 pseudo-random integers which take values from 1 through 10. Use the table() function to check whether the observed frequencies for each value are close to what you expect.
4. Simulate 10000 binomial pseudo-random numbers with parameters 10 and 0.4. Let X be a Binomial(10, 0.4) random variable. Use the simulated numbers to estimate the following quantities:
    - $Pr(X \leq 3)$
    - $Pr(X = 3)$