Andrew Owen

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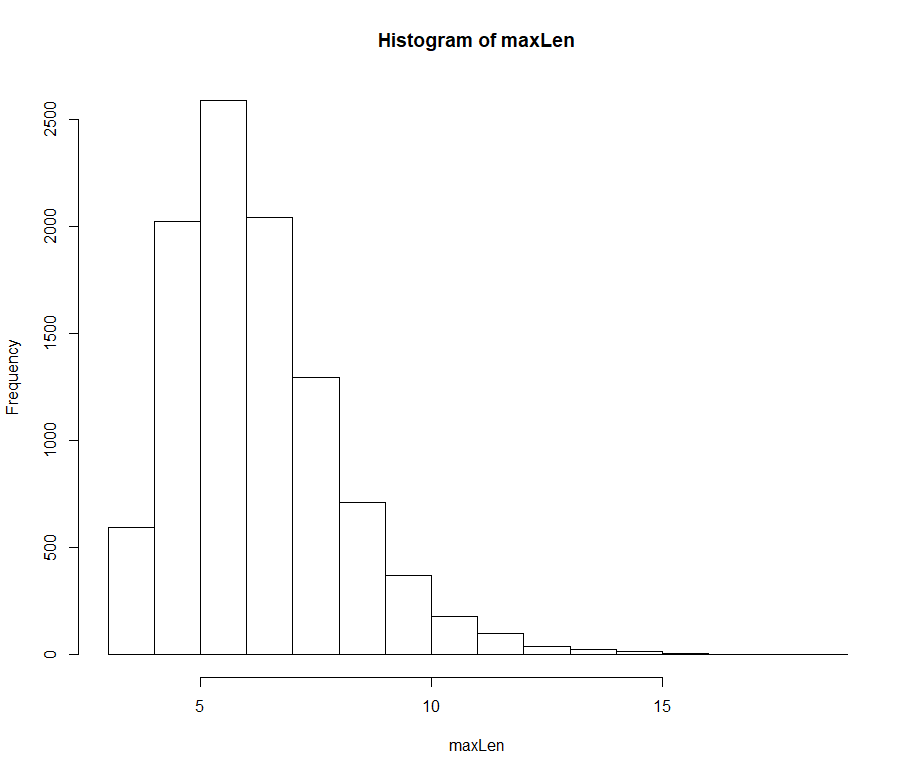
MATH 341

Homework 5

1. Take   
   If  
   If   
   So,   
     
   Take
2. A) (total - In Language)/total =   
     
   B)   
     
   C) = = 75.225%
3. ✓
4. Freshman - 10  
    Sophomore - 25  
    Junior - 30  
    Senior - 45  
      
      
      
      
      
      
      
      
    )  
      
      
     
      
     
   = 0.2382 = 23.82%
5. If , one case must be that all events are mutually exclusive (noted with a ‘\*’). Meaning . If one or more of the cases are not mutually exclusive, then as to not over-count the intersection between two or more events. So, as it accounts for all cases of possible intersection between the events.

(Histogram for part A below)

1. The likelihood of Baltimore winning 10 games in a row in one season is relatively low, sitting at approximately 0.025 or 2.5% (from the data). While the likelihood of them winning 15 games in a row is even lower (low enough that I cannot visually estimate its value). So while winning ten games in a row is unlikely, it is far more unlikely that they will win 1 games in a row.
2. When I simulated 10000 seasons, there were 31 seasons where Cleveland Indians got a 22 or higher game win streak. 31/10000 = 0.0031 = 0.31%, which is a very unlikely possibility that they will win 22 or more games in a row.
3. When I simulated 10000 seasons, there were 12 seasons where the Los Angeles Dodgers lost 11 or more games in a row. 12/10000 = 0.0012 = 0.12%, which is a very unlikely possibility that they will lose 11 or more games in a row.



1. A)   
   B)