

1. Flip four coins. Then draw with replacement from a word (specified below) until you get **one more vowel than the number of heads you got**. The word to be used also depends on the number of heads thrown:

Number of heads thrown	Word to use
0H	PARROT
1H	CLOWN
2H	COMIC
3H	PALM
4H	EAGLE

What is the expected number of letters drawn?

2. Draw four letters without replacement from  
TENNESSEE  
Find
  - a) the expected value
  - b) the variancefor the number of different letters drawn.
3. Find
  - a) the expected value
  - b) the variancefor the number of hearts in an 8-card hand.
4. An urn contains 11 balls each of 8 different colors. Draw 6 times with replacement. Find the
  - a) the expected value
  - b) the variancefor the number of different colors drawn.
5. A 500-page book has 850 misprints. What is the probability there are at least two misprints on page 79?