Additional Stuff Graded Assignment

1. 30% of the news site's visitors read its main article. For men this probability is equal to ¼. What is the probability of the visitor being male if he/she read the main article, assuming that the number of men and women visiting the site is equal? (5 points)
2. X is the maximum result of two independent dices rolls.
   1. Find the distribution of X.
   2. Find the expected value of X
   3. Find the variance of X.

If Y is the result of the 1st roll,

* 1. What is the joint distribution of X and Y?
  2. Find the covariance of X and Y.

To provide solutions for b, c and e you can calculate it manually or write python code with the result. (10 points)

1. A perfect coin is tossed 100 times. Find the probability that the number of heads obtained is between 45 and 60. (5 points)
2. Let be events on a probability space . Suppose that and for any . Is it true that ? (5 points)