

Very Simple Binomial Questions

Some of these questions are not really binomial, but treat them in that spirit. . .

- When I come to traffic stops there is a probability of 0.1 of them being red. If I come to 12 lights on my way to work, find
 - prob all red 1×10^{-12}
 - prob all green 0.2824
 - prob exactly 6 of them red 4.91×10^{-4}
 - prob exactly 3 green 1.604×10^{-7}
- In a bag of dates from Oman, it is expected that 30% should be off/bad. In a sample of 30, find the probability that:
 - all of them are good 2.254×10^{-5}
 - exactly 5 are bad 0.0464
 - exactly 13 are good 0.0015
- If 20 percent of the population is left handed, find the probability that a group of eight people contains:
 - exactly 2 left handers 0.2936
 - at least 2 left handers 0.4967
 - not more than 3 left handers 0.9437
- Candy wins, on average, seven hands of Poker in every 10 hands she plays:
 - prob she wins exactly 14 hands from 20 0.1916
 - prob she loses exactly 2 games from 10 0.2335
 - prob that in 6 games she wins more than she loses 0.7443
 - what assumptions have been made to solve the above problems Prob winning independent
- In a very large Ibiza night club one fifth of the people are expected to pull. In a random sample of 25, find the probability that:
 - None have pulled 0.0038
 - All have pulled 3.36×10^{-18}
 - Exactly 5 have pulled 0.1960
 - Fewer than 6 have pulled 0.6167
 - More than 8 have pulled 0.0468
- Chocolate bars that are sold from a vending machine are either plain or milk chocolate in the ratio 3 : 2.
 - If three bars are bought, prob at least one is milk 0.784
 - If four bars bought, prob at least one is milk 0.8704
 - If six bars bought, prob at least one milk 0.9533
 - How many bars need to be bought in order for the chance of obtaining at least one milk chocolate bar to be over 95% 6
 - How many bars need to be bought in order for the chance of obtaining at least one milk chocolate bar to be over 99% 10