

Binomial random variables (Review)

1. Suppose that you are rolling a die eight times. Find the probability that the face with two spots comes up exactly twice.
2. A new restaurant opening in Greenwich village has a 30% chance of survival during their first year. If 16 restaurants open this year, find the probability that exactly 3 restaurants survive.
3. The probability of winning at a certain game is 0.10. If you play the game 10 times, what is the probability that you win at most once?
4. The probability is 0.3 that an audit of a retail business will turn up irregularities in the collection of state sales tax. If 16 retail businesses are audited, find the probability that
 - (a) fewer than 5 will have irregularities in the collection of state sales tax.
 - (b) more than 5 will have irregularities in the collection of state sales tax.

