

## Assignment Binomial Distribution-2

**Find the probability of each event.**

- 1) There are twelve songs on your playlist. Five of them are country and seven are pop. With random shuffle and no repetition, you listen to seven songs. What is the probability that you listened to at most three country songs?
- 2) A technician is launching fireworks near the end of a show. Of the remaining ten fireworks, five are blue and five are red. If she launches five of them in a random order, what is the probability that at least two of them are blue ones?
- 3) A hotel has four elevators. One of them is a freight elevator. When pressing the button, one of the elevators randomly services your floor. If you use the elevators five times, what is the probability that you use the freight elevator exactly two times?
- 4) A class has six students. What is the probability that exactly two of the students were born on a weekend?
- 5) A basketball player has an 80% chance of making each free throw. What is the probability that the player makes at most five out of seven free throws?
- 6) A quiz consists of five multiple choice questions. Each question has four choices. A student who forgot to study guesses randomly on every question. What is the probability that the student answers at most three questions correctly?
- 7) A quiz consists of five multiple choice questions. Each question has four choices. A student who forgot to study guesses randomly on every question. What is the probability that the student answers exactly three questions correctly?
- 8) Jimmy is carrying five pages of math homework and eight pages of English homework. A gust of wind blows the pages out of his hands and he is only able to recover six random pages. What is the probability that he recovers at least two pages of his math homework?
- 9) A quiz consists of six multiple choice questions. Each question has four choices. A student who forgot to study guesses randomly on every question. What is the probability that the student answers exactly three questions correctly?
- 10) A test consists of eleven true/false questions. A student who forgot to study guesses randomly on every question. What is the probability that the student answers at least ten questions correctly?

## Answers to Assignment Binomial Distribution-2

1) 75.253%  
5) 42.328%  
9) 13.184%

2) 89.683%  
6) 98.438%  
10) 0.586%

3) 26.367%  
7) 8.789%

4) 31.874%  
8) 82.051%

