

## Assignment Binomial Distribution-1

Date \_\_\_\_\_ Period \_\_\_\_\_

**Find the probability of each event.**

- 1) A six-sided die is rolled eleven times. What is the probability that the die will show an even number exactly six times?
- 2) A basketball player has a 50% chance of making each free throw. What is the probability that the player makes exactly five out of eight free throws?
- 3) One day, eleven babies are born at a hospital. Assuming each baby has an equal chance of being a boy or girl, what is the probability that at most nine of the eleven babies are girls?
- 4) A six-sided die is rolled eight times. What is the probability that the die will show an even number at least two times?
- 5) Pranav is carrying eight pages of math homework and two pages of English homework. A gust of wind blows the pages out of his hands and he is only able to recover eight random pages. What is the probability that he recovers all of his math homework?
- 6) A mechanic working under a car requires five different size wrenches from his toolbox, which contains eleven different wrenches. Reaching for his toolbox, he grabs five of them at random. What is the probability that the mechanic has all of the wrenches he needs?
- 7) A class has seven girls and eight boys. If the teacher randomly picks eight students, what is the probability that she will pick exactly five boys?
- 8) A shipment of thirteen smartphones contains nine with cracked screens. If sold in a random order, what is the probability that exactly four of the first six sold have cracked screens?
- 9) A class has seven girls and six boys. If the teacher randomly picks eight students, what is the probability that she will pick exactly four boys?
- 10) A jar contains nine black buttons and six brown buttons. If seven buttons are picked at random, what is the probability that exactly five of them are black?

## Answers to Assignment Binomial Distribution-1 (ID: 1)

1) 22.559%  
5) 2.222%  
9) 40.793%

2) 21.875%  
6) 0.216%  
10) 29.371%

3) 99.414%  
7) 30.458%

4) 96.484%  
8) 44.056%