

Name: \_\_\_\_\_

Course & Section: \_\_\_\_\_

*Electronic copies of this homework are located in D2L.*

## **Binomial Post Class**

### **Part 1**

Watch the Video: [Binomial Post Class Activity Part 1](https://www.youtube.com/watch?v=K3vD_cOOzrk) (https://www.youtube.com/watch?v=K3vD\_cOOzrk)

### **Part 2**

Watch the Video: [Binomial Post Class Activity Part 2](https://www.youtube.com/watch?v=ysc7OBk1SVg) (https://www.youtube.com/watch?v=ysc7OBk1SVg)

1. Find  $P(x > 8)$ 
  - a. 0.7560
  - b. 0.2440
  - c. 0.2816
  - d. 0.5256
  
2. Find  $P(6 \leq x \leq 9)$ 
  - a. 0.1877
  - b. 0.1460
  - c. 0.8656
  - d. 0.2241

### **Part 3**

Watch the Video: [Binomial Post Class Activity Part 3](https://www.youtube.com/watch?v=5MBQAJVmR3M) (https://www.youtube.com/watch?v=5MBQAJVmR3M)

### **Part 4**

Watch the Video: [Binomial Post Class Activity Part 4](https://www.youtube.com/watch?v=UIrlwj_J1BE) (https://www.youtube.com/watch?v=UIrlwj\_J1BE)

1. Is  $X$  a binomial random variable?
  - a. Yes
  - b. No

### **Part 5**

Watch the Video: [Binomial Post Class Activity Part 5](https://www.youtube.com/watch?v=bsX30DMx1Ms) (https://www.youtube.com/watch?v=bsX30DMx1Ms)

1. What value should we use for the number of trials,  $n$ ?
  - a. .5
  - b. 1
  - c. 20
  - d. 100

### **Part 6**

Watch the Video: [Binomial Post Class Activity Part 6](https://www.youtube.com/watch?v=M2-MDoQPZU8) (https://www.youtube.com/watch?v=M2-MDoQPZU8)

1. What is the probability that exactly 15 students out of the 20 surveyed prefer activities? Round to 4 decimal places.
  - a. 0.9941
  - b. 0.0148
  - c. 0.9852
  - d. 0.0060
  
2. What is the probability that 15 or more students out of the 20 surveyed prefer activities? Round to 4 decimals.
  - a. 0.0060
  - b. 0.0207
  - c. 0.0370
  - d. 0.9793

### Part 7

Watch the Video: [Binomial Post Class Activity Part 7](https://www.youtube.com/watch?v=cFHKBaJKh6E) (https://www.youtube.com/watch?v=cFHKBaJKh6E)

### Part 8

Watch the Video: [Binomial Post Class Activity Part 8](https://www.youtube.com/watch?v=ILezszQQ0vc) (https://www.youtube.com/watch?v=ILezszQQ0vc)

1. Is X a binomial random variable?
  - a. Yes
  - b. No
  
2. What is the value of n?
  - a.  $\frac{1}{3}$
  - b. 1
  - c. 20
  - d. 15
  
3. What is the value of p? Write as a fraction (e.g.  $\frac{2}{5}$ ).
  - a.  $\frac{1}{3}$
  - b.  $\frac{2}{3}$
  - c. 1
  - d. 0
  
4. What is the probability that you see "Paper" fewer than 5 times? Round to 4 decimals.
  - a. 0.4041
  - b. 0.1977
  - c. 0.5852
  - d. 0.7908

### Part 9

Watch the Video: [Binomial Post Class Activity Part 9](https://www.youtube.com/watch?v=VA-_piQPjmc) (https://www.youtube.com/watch?v=VA-\_piQPjmc)