

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

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

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

## Probability Post Class Activity

### Part 1

Watch the Video: [Probability Post Class Part 1](https://www.youtube.com/watch?v=T2eIGYtbS8g) ( <https://www.youtube.com/watch?v=T2eIGYtbS8g>)

1. Assuming the wheel is fair, what is the probability of getting any one specific number? Use fraction notation (e.g.1/20).
  - a.  $\frac{1}{38}$
  - b.  $\frac{37}{38}$
  - c.  $\frac{18}{38}$
  - d.  $\frac{19}{38}$

### Part 2

Watch the Video: [Probability Post Class Part 2](https://www.youtube.com/watch?v=SgRDBITSGYA) (<https://www.youtube.com/watch?v=SgRDBITSGYA>)

*A Roulette wheel has 18 Red, 18 Black and 2 green slots.*

1. What is the probability of NOT getting a 15?
  - a.  $\frac{1}{38}$
  - b.  $\frac{37}{38}$
  - c.  $\frac{18}{38}$
  - d.  $\frac{19}{38}$
2. Use fraction notation (e.g.1/20).
  - a.  $\frac{1}{38}$
  - b.  $\frac{37}{38}$
  - c.  $\frac{18}{38}$
  - d.  $\frac{19}{38}$

### Part 3

Watch the Video: [Probability Post Class Part 3](https://www.youtube.com/watch?v=GcjQn_XssCI) ([https://www.youtube.com/watch?v=GcjQn\\_XssCI](https://www.youtube.com/watch?v=GcjQn_XssCI))

1. Suppose you bet on 15. You continue to play, always betting on 15. What do you expect to happen?
  - a. Never win
  - b. Win  $\frac{1}{2}$  of the time
  - c. Win 2-3 times
  - d. Always win

#### Part 4

Watch the Video: [Probability Post Class Part 4](https://www.youtube.com/watch?v=J12KeM0ZLgM) (https://www.youtube.com/watch?v=J12KeM0ZLgM)

1. What is the probability of getting a red number?
  - a.  $\frac{1}{38}$
  - b.  $\frac{37}{38}$
  - c.  $\frac{18}{38}$
  - d.  $\frac{19}{38}$

#### Part 5

Watch the Video: [Probability Post Class Part 5](https://www.youtube.com/watch?v=wd6-P8XXOqk) (https://www.youtube.com/watch?v=wd6-P8XXOqk)

1. What is the probability of getting a black number?
  - a.  $\frac{1}{38}$
  - b.  $\frac{37}{38}$
  - c.  $\frac{18}{38}$
  - d.  $\frac{19}{38}$
  
2. Is it the same as the probability of not getting a red number?
  - a. Yes
  - b. No
  - c. Other: \_\_\_\_\_

#### Part 6

Watch the Video: [Probability Post Class Part 6](https://www.youtube.com/watch?v=IXrdxveEXpk) (https://www.youtube.com/watch?v=IXrdxveEXpk)

1. Suppose you bet on red. You continue to play, always betting on red, 100 times. What do you expect to happen?
  - a. No wins
  - b. 2-3 wins
  - c. 47 or 48 wins
  - d. 100 wins

#### Part 7

Watch the Video: [Probability Post Class Part 7](https://www.youtube.com/watch?v=Wrn8YKcTRaY) (https://www.youtube.com/watch?v=Wrn8YKcTRaY)

1. Is the  $P(\text{square or red}) = P(\text{square}) + P(\text{red})$ ?
  - a. Yes
  - b. No

#### Part 8

Watch the Video: [Probability Post Class Part 8](https://www.youtube.com/watch?v=Gk9S-IKviD4) (https://www.youtube.com/watch?v=Gk9S-IKviD4)

1. Do A and B overlap?
  - a. Yes
  - b. No

2.  $P(A^c) =$
- a. 1
  - b. .7
  - c. .3
  - d. .95

3.  $P(A \text{ or } B) =$
- a. .1
  - b. .7
  - c. .3
  - d. .95

*Probability Rules Handout*

Visit to get a summary of the probability rules: <http://goo.gl/NXSy1V>

### **Part 9**

Watch the Video: [Probability Post Class Part 9](https://www.youtube.com/watch?v=bkYEZBEPQm) (<https://www.youtube.com/watch?v=bkYEZBEPQm>)