

Homework 5: POLS 6331

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4/1/2021

Note

Following are the homework 5 answers as calculated in R Programming Language for Statistics.

If there are any questions, please send me an email at tlhanna@uh.edu with POLS6331 (all caps, no spaces) in the subject line. I also hold weekly Zoom office hours from 2 PM to 3:30 PM Tuesday and Wednesday.

```
library(here)
```

```
## Warning: package 'here' was built under R version 4.0.3
```

```
## here() starts at C:/Users/tomha/Documents/3 - R Studio Projects/Teaching/POLS3361-Spring2021
```

```
#question 1
```

```
percenttied <- 7.8+12.4+5.1+1+0.1  
percenttied
```

```
## [1] 26.4
```

```
#question 2
```

```
homewins <- 10.5+8.9+2.5+.3+7.9+4.2+.8+0.1+4.2+1.7+.2+1.6+.5+.1+.6+.1+.2+.1  
homewins
```

```
## [1] 44.5
```

```
#question 3
```

```
awaywins <- 100 - (homewins + percenttied)  
awaywins
```

```
## [1] 29.1
```

```
#Part 2
```

```
english <- 63  
french <- 22  
asiapacific <- 6
```

```
#question 4
```

```
otherpercent <- 100 - (english + french + asiapacific)  
otherpercent
```

```
## [1] 9
```

```
#question 5  
notenglish <- 100 - english  
notenglish
```

```
## [1] 37
```

```
#question 6  
#Since order doesn't matter, English-French is the same as French-English, etc.  
#You can figure this out mathematically (4 x 4) - 6 duplicates or reproduce  
#the sample space and count, as follows:  
# S = {EE, EF, EA, EO, FF, FA, FO, AA, AO, OO} = 10  
  
#question 7  
chance2english <- (english/100)*(english/100)  
chance2english
```

```
## [1] 0.3969
```

```
#question 8  
chance2french <- (french/100)*(french/100)  
chance2ap <- (asiapacific/100)*(asiapacific/100)  
chance2other <- (otherpercent/100)*(otherpercent/100)  
  
chancesame <- chance2english + chance2french + chance2ap + chance2other  
chancesame
```

```
## [1] 0.457
```

```
#question 9  
possibleways <- factorial(8)/(factorial(5)*factorial(8-5))  
possibleways
```

```
## [1] 56
```

```
#question 10  
english.fiveeight <- (.63^5)*(.37^3)*possibleways  
english.fiveeight
```

```
## [1] 0.2815114
```