ph1855_hw8_ygu5

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Hollander et al. Nonparametric Statistical Methods 2014

P409 Q3

```
# test independence
# input data
X = c(515,286,469,410,461,436,479,198,389,262,536)
Y = c(32500,26800,11410,14850,23640,23820,29840,21830,24650,22500,26000)
# conduct Kendall test
cor.test(X, Y, method="kendall")
```

```
##
##  Kendall's rank correlation tau
##
## data:  X and Y
## T = 35, p-value = 0.283
## alternative hypothesis: true tau is not equal to 0
## sample estimates:
##       tau
## 0.2727273
```

P442 Q52

```
# test independence
# input data
year = c(1950,1951,1952,1953,1954,1955,1956,1957,1958,1959,1960,1961,1962,1963,1964)
number_odds = c(10,20,17,16,12,15,13,18,17,19,21,23,23,28,28)
# conduct Spearman correlation test
cor.test(year, number_odds, method="spearman", alternative = "greater")
```

```
## Warning in cor.test.default(year, number_odds, method = "spearman", alternative
## = "greater"): Cannot compute exact p-value with ties
```

```
##
##  Spearman's rank correlation rho
```

```
##
## data:  year and number_odds
## S = 114.81, p-value = 0.0001984
## alternative hypothesis: true rho is greater than 0
## sample estimates:
##       rho
## 0.7949894
```