# lec4q22

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```r
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```r
library(binom)
alpha <- 0.05
```

2.

```r
#Non-native group
w.v2 <- 118
n.v2 <- 211

#Native group
w.p2 <- 155
n.p2 <- 206
```

H0: pi1 - pi2 = 0
Ha: pi1 - pi1 < 0 alpha = 0.05

Use score test

```r
prop.test(x=c(w.v2, w.p2), n=c(n.v2, n.p2), alternative="less", correct=FALSE)
```

```
##
##  2-sample test for equality of proportions without continuity
##  correction
##
## data:  c(w.v2, w.p2) out of c(n.v2, n.p2)
## X-squared = 17.207, df = 1, p-value = 1.676e-05
## alternative hypothesis: less
## 95 percent confidence interval:
##  -1.0000000 -0.1183044
## sample estimates:
##    prop 1    prop 2
## 0.5592417 0.7524272
```

We reject H0 because p value is smaller than alpha. So we conclude that non-native English speaking students do not pick up on humor as much as native English speaking stduents.