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STAT318 HW6

2/28/19

2)

Calculation of p value

```
> 1-pnorm(1.3654)
[1] 0.08606368
```

3)

Calculation of p value

```
> 2*(1-pnorm(7.8608))
[1] 3.774758e-15
```

6)

a)

```
> library(fmsb)
> riskratio(80,63,1641,3298, conf.level= .99)
           Disease Nondisease Total
Exposed         80       1561  1641
Nonexposed      63       3235  3298

        Risk ratio estimate and its significance probability

data:  80 63 1641 3298
p-value = 4.84e-09
99 percent confidence interval:
 1.665386 3.910823
sample estimates:
[1] 2.552064
```

b)

We are 99% confident that the true relative risk between non vaccinated and vaccinated children catching the rotovirus is between 1.6653 and 3.9108.

7)

a)

p1: 2009 people

p2: 2010 people

Ho: p1= p2

Ha: p1>p2

b)

test statistic= sqrt(.53257)= .7298

p-value= .2328

```
> prop.test(x=c(458,441), n=c(1134,1134), alternative = "greater", correct=F)

        2-sample test for equality of proportions without
        continuity correction

data:  c(458, 441) out of c(1134, 1134)
X-squared = 0.53257, df = 1, p-value = 0.2328
alternative hypothesis: greater
95 percent confidence interval:
 -0.01879377  1.00000000
sample estimates:
   prop 1    prop 2
0.4038801 0.3888889
```

c)

```
> wald2ci(x1=458, n1=1134, x2=441, n2=1134, conf.level= .9, adjust = "AC")



data:

90 percent confidence interval:
 -0.01879308  0.04872266
sample estimates:
[1] 0.01496479
```

We are 90% confident that the true difference in proportions of American adults with guns in the home from 2009 and 2010 is between -.0188 and .0487..