

Handout 8: Confidence interval for proportion supporting gay marriage

```
table(politics$gaymarriage)
```

```
##  
## No legal recognition      Civil unions Support gay marriage  
##              773              992              2473
```

```
#sum up to get n  
773+992+2473
```

```
## [1] 4238
```

```
#estimate p-hat  
round(2473/4238,2)
```

```
## [1] 0.58
```

```
#t-stat  
qt(0.975, 4238-1)
```

```
## [1] 1.960524
```

$$\text{standard error} = \sqrt{\hat{p} * (1 - \hat{p}) / n} =$$

$$\text{confidence interval} = \hat{p} \pm t * (\text{standard error}) =$$

Name (Print and Sign): _____