Week 5 Assignment

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Problem Set 1

Question 1

Script to compute $A^T A$ and $A^T b$ Use the given matrix in the Problem set which is unsolvable

```
A <- matrix(c(1,1,1,1,0,1,3,4), ncol=2)
b <- c(0,8,8,19)

A
```

```
##      [,1] [,2]
## [1,]    1    0
## [2,]    1    1
## [3,]    1    3
## [4,]    1    4
```

```
b
```

```
## [1]  0  8  8 19
```

Compute $A^T A$

```
(AtA <- t(A) %*% A)
```

```
##      [,1] [,2]
## [1,]    4    8
## [2,]    8   26
```

Compute $A^T b$

```
(Atb <- t(A) %*% b)
```

```
##      [,1]
## [1,]   35
## [2,]  108
```