STAT 158 Final Exam

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1)

```
n <- 30
coefs_age <- rep(0,1e4)
coefs_age2 <- rep(0,1e4)
for (i in 1:1e4) {
 Age=round(runif(n,min=18,max=70))
 Age2 <- Age^2
 HR <- 94-Age*0.5+Age2*0.0035+rnorm(n,sd=10)
 model <- lm(HR~Age+Age2)
 coefs_age[i] <- summary(model)$coefficients[2,1]
 coefs_age2[i] <- summary(model)$coefficients[3,1]
}
mean(coefs_age)
```

```
## [1] -0.5016131
```

```
mean(coefs_age2)
```

```
## [1] 0.003535711
```