

## Question 2

c) R code:

```
# c)
matrixX <- as.matrix(cbind(rep(1,n),name))
betahat <- solve(t(matrixX)%*%matrixX)%*%t(matrixX)%*%y
betahat
```

output:

```
              [,1]
rep(1, n) -320631.9803
size      106.7541
age       -137.1087
employees 6846.5636
col       244468.2310
```

d) The 95% confidence interval for  $\beta_1$  is [60.781, 152.7272]. This interval is not consistent with the “true” model since 50 is not included in this interval.

```
# d)
confint(A1sim.lm, "size", 0.95)
```