

Lesson 4 Practice Hands-On

Solution

Below you will find the solution to the Lesson 4 hands-on!

Part I

```
#Backward Selection
FitAll1 <- lm(IQ ~ ., data = IQ)

summary(FitAll1)

step(FitAll1, direction = 'backward')

#Create another model for only selected variables and compare
their results
fitsome <- lm(IQ ~ Test1 + Test2 + Test4, data = IQ)
summary(fitsome)
```

Part II

```
#Backward Selection
FitAll = lm(Y ~ ., data = stepwiseRegression)
summary(FitAll)

step(FitAll, direction = 'backward', scope = formula(FitAll))

#Forward Selection
fitstart = lm(Y ~ 1, data = stepwiseRegression)
summary(fitstart)
```

```
step(fitstart, direction = 'forward', scope = (formula(FitAll)))
```

```
#StepWise
```

```
step(fitstart, direction = 'both', scope = formula(FitAll))
```

```
fitsome <- lm(formula = Y ~ X2 + X4 + X6 + X10 + X11 + X12, data  
= stepwiseRegression)
```

```
summary(fitsome)
```

#Compare the output from the different types of stepwise
selections above and note the **order** of the elimination of
features