Exercises:

2.1 In model (2.14), applied to car data, remove the cubic term and estimate the new model. Observe that the quadratic term becomes significant. Explain this result.

(2.14)

Out:

> y

Call:

lm(formula = city.distance ~ engine.size + I(engine.size^2) +

I(engine.size^3) + fuel)

Coefficients:

(Intercept) engine.size I(engine.size^2) I(engine.size^3) fuelgas

28.0451 -10.9795 2.0977 -0.1309 -3.2141

> y2

Call:

lm(formula = city.distance ~ engine.size + I(engine.size^2) +

fuel)

Coefficients:

(Intercept) engine.size I(engine.size^2) fuelgas

25.3792 -7.7569 0.9123 -3.2088