

Exercise 1

Open the 1978 Automobile Data and summarize the variables.

```
. sysuse auto
(1978 Automobile Data)
. summarize
```

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|--------------|-----|----------|-----------|------|-------|
| make | 0 | | | | |
| price | 74 | 6165.257 | 2949.496 | 3291 | 15906 |
| mpg | 74 | 21.2973 | 5.785503 | 12 | 41 |
| rep78 | 69 | 3.405797 | .9899323 | 1 | 5 |
| headroom | 74 | 2.993243 | .8459948 | 1.5 | 5 |
| trunk | 74 | 13.75676 | 4.277404 | 5 | 23 |
| weight | 74 | 3019.459 | 777.1936 | 1760 | 4840 |
| length | 74 | 187.9324 | 22.26634 | 142 | 233 |
| turn | 74 | 39.64865 | 4.399354 | 31 | 51 |
| displacement | 74 | 197.2973 | 91.83722 | 79 | 425 |
| gear_ratio | 74 | 3.014865 | .4562871 | 2.19 | 3.89 |
| foreign | 74 | .2972973 | .4601885 | 0 | 1 |

Exercise 2

Run a regression of price on milage and weight.

```
. regress price mpg weight
```

| Source | SS | df | MS | Number of obs | = | 74 |
|----------|-----------|----|------------|---------------|---|--------|
| Model | 186321280 | 2 | 93160639.9 | F(2, 71) | = | 14.74 |
| Residual | 448744116 | 71 | 6320339.67 | Prob > F | = | 0.0000 |
| Total | 635065396 | 73 | 8699525.97 | R-squared | = | 0.2934 |
| | | | | Adj R-squared | = | 0.2735 |
| | | | | Root MSE | = | 2514 |

| price | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
|--------|-----------|-----------|-------|-------|----------------------|
| mpg | -49.51222 | 86.15604 | -0.57 | 0.567 | -221.3025 122.278 |
| weight | 1.746559 | .6413538 | 2.72 | 0.008 | .467736 3.025382 |
| _cons | 1946.069 | 3597.05 | 0.54 | 0.590 | -5226.245 9118.382 |