FINM3123 Introduction to Econometrics

Chapter 1 Exercises

Solutions

1.

(i) The largest is 100, the smallest is 0.

(ii) 38 out of 1,823, or about 2.1 percent of the sample.

(iii) 17

(iv) The average of *math4* is about 71.9 and the average of *read4* is about 60.1. So, at least in 2001, the reading test was harder to pass.

(v) The sample correlation between *math4* and *read4* is about .843, which is a very high degree of (linear) association. Not surprisingly, schools that have high pass rates on one test have a strong tendency to have high pass rates on the other test.

(vi) The average of *exppp* is about \$5,194.87. The standard deviation is \$1,091.89, which shows rather wide variation in spending per pupil. [The minimum is \$1,206.88 and the maximum is \$11,957.64.]

(vii) The percentage by which school A outspends school B is

$$100 \cdot \frac{(6{,}000 - 5{,}500)}{5{,}500} \approx 9.09\%$$

When we use the approximation based on the difference of the natural logs we get a somewhat smaller number:

$$100 \cdot [\log(6{,}000) - \log(5{,}500)] \approx 8.71\%$$