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Economics 300
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Answers to Review Questions for the Final Exam

I do not show my work. You would need to show your work to get full credit on the exam.

(1) a. .59

b. .68

(2) a. p(0) = .15; p(1) = .22; p(2) = .63

b. $\mu = 1.48$; $\sigma = .74$

(3) a. use independent samples formula; 10.0 ± 2.45*6.43 yields 10.0 ± 15.8

b. $t = \frac{10.0}{6.43} = 1.56$; d.f. = 6, so we see from Table V that the one-sided p-value < 10, so the two-sided p-value < .20; there fore the programs are not statistically discernable at the 5% level (we can tell this from the answer to part a. also, because 0 is contained in the confidence interval)

(4) a. no; would instead use all the data and fit a regression line to use in prediction

b. 71.5 ± 5.2 inches

(5) a. 18% more

b. 1.2% less

c. 9% less

d. 10.2% less

e. 18% ± 2%

(6) a. r = -.163; $-.86 < \rho < .75$ (confidence interval is found using Figure 15-4)

b. Y = .333 -.176X; $\beta = -.176 \pm 1.95$; no

(7) a. .036 ± .019

b. p < .0005 (t = 4.0); discernible

c. this is a time series, and sampling a set of successive years is not random sampling. The observations are dependent and the confidence interval should be wider.

(8) only the third equation can be identified/estimated