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Economics 300
Summer 2010
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Answers to Review Problems for Test #2

1) a. 0.233 b. 0.932

2) a. $8000 b. $6857

3) a. .63 ± .024 b. .16 ± .035

4) a. H_0: $\Delta = 0$; H_A: $\Delta \neq 0$ (think about why one would prefer a two-sided alternative over a one-sided alternative)

b. $\Delta = 3.0 \pm 4.0$; no, because 0 is contained in the interval

c. $.20 > p > .10$ (t-ratio is 1.93 at 5 d.f.; need to double value from table because this is a two-tailed p-value) ; no, because $p > .05$

d. less effective, because the matched sample method reduces the sampling noise/error

5) a. $Y = 156 + 2.35X$, where Y = mortality rate and X = bottle-feeding percentage

b. since the slope is positive, higher bottle feeding is associated with higher rather than lower mortality. However, this does not prove that bottle-feeding is harmful. The data are not generated from a controlled observational study, nor have we controlled for other factors using a multiple regression framework, nor would a regression ever <u>prove</u> a causal relationship.