ECO240 Practice Question for Section 8.2.

8.10. Assuming unequal population variances, determine the number of degrees of freedom for each of the following:

a. $n_1 = 12, s_1^2 = 6, n_2 = 14, s_2^2 = 10$

d. $n_1 = 6, s_1^2 = 30, n_2 = 7, s_2^2 = 36$

8.15

Recent business graduates currently employed in full-time positions were surveyed. Family background were self-classified as relatively high or low socioeconomic status. For a random sample of 16 high-socioeconomic-status recent business graduates, the mean total compensation was $34,500 and the sample standard deviation was $8,520. For an independent random sample of 9 low-socioeconomic-status recent business graduates, the mean total compensation was $31,499 and the sample standard deviation was $7521. Find a 90% confidence interval for the difference between the two population means.

8.16.

Suppose, for a random sample of 200 firms that revalued their fixed assets, that the mean ratio of debt to tangible assets was 0.517 and the sample standard deviation was 0.148. For an independent random sample of 400 firms that did not revalue their fixed assets, the mean ratio of debt to tangible assets was 0.489 and the sample standard deviation was 0.158. Find a 99% confidence interval for the difference between the two population means.