Due: Thursday, November 9, 2000

6.11, 6.13

6.17, 6.19

B12: For each of the problems:

(a)   A box label claims that on average boxes contain 40oz. A random sample of 12 boxes shows an average of 39oz., with s = 2.2. Should we dispute the claim?

(b)   We know from experience that Farmer A's pigs average 570 lbs. A sample of 16 pigs from Farmer B averages 590 lbs., with an s.d. of 110. Is it safe to say B's pigs are heavier on average?

(c)   Same as (b), except "lighter on average".

(d)   Same as (b) except sample average is 630 lbs.

Do:

(i)   Define he population mean of interest.

(ii)   Formulate H+, H0 and H- in terms of (>, =, <, respectively)

(iii)   Give the p-values for both H+ and H-:
        ((a) 0.942, 0.058   (b) 0.254, 0.766   (c) 0.254, 0.766   (d) 0.015, 0.985)

(iv)   Give a yes-no answer to questions.
        ((a) H- → don't dispute   (b) H+ → not safe   (c) H- → not safe   (d) H+ → safe)

(v)   Give a gray level answer to questions.
        ((a) H- → moderate evidence against   (b) H+ → no strong evidence   (c) H- → seems to go other way   (d) H+ → strong evidence, almost very strong)