

For each of the following problems, use the most appropriate statistical test to answer the question. Unless instructed otherwise, follow the protocol for hypothesis testing. Staple this sheet on top, followed by protocol sheet(s) and output. **LATE ASSIGNMENTS WILL NOT BE ACCEPTED.**

1. Read about the variables in the data file EGGSIZE.SYD before proceeding. For all analyses, assume that EWID is normally distributed. Answer the following questions: Was there any difference in width of eggs among the years 1979, 1981, and 1985? If so, which years were different from which other years?

2. A medical researcher studied the relative effectiveness of two treatments (CAW and FAW) known to be effective for carpal tunnel syndrome in computer operators. In order to make a recommendation to medical clinicians for the preferred treatment of this common musculoskeletal problem, he analyzed the data below on percent improvement in wrist flexion speed (mm/sec) in 21 subjects who finished either the CAW or FAW treatments. Which treatment would you recommend? Why?

CAW - 14.0, 19.1, 4.9, 5.6, 3.4, 5.5, 19.0, 5.9, 11.4, 5.6, 21.4, 4.7

FAW - 19.0, 34.2, 19.6, 14.6, 4.6, 14.1, 37.8, 10.9, 61.2

3. Water mites (*Arrenurus* sp) rarely infest chironomid flies (*Calopsectra akrina*), but when they do, it is thought that the mites infest the flies in a random manner (i.e., mites do not discriminate among flies), at least in ponds where mite density is low. From a pond of high mite density, 589 flies were collected and examined for mite infestation. In this high-density pond, did mites also infest flies randomly?

No. Mites/ Fly	No. flies	No. Mites/ fly	No. flies
0	442	5	6
1	91	6	2
2	29	7	0
3	14	8	1
4	4		
Total=589			