HW1 Grading Rubric [10 points]

due 2/5/09

Pts	Exercise
3	**16.12 Drove while drinking alcohol.** One point for reasonable answer to (a) and one point for (b). There is more than one reasonable answer in each case. Examples of reasonable answers: **(a)** Results will be biased if those who refused to participate differed systematically (with respect to their response) from those who participated. **(b)** Things to consider when addressing the accuracy of responses: Did the respondents understand the question? Were the adolescents fearful of telling the truth about behaviors? Were respondents trying to "play" the people administering the survey?
3	**16.14** ***BRCA1 mutations in familial breast cancer cases.*** [1 pt] Prevalence $\hat{p} = \frac{27}{169}$ = 0.1598 (approx. 16%) [1] 95% confidence interval for *p* by plus-four method = 0.1676 ± (1.96)(0.0284) = 0.1676 ± 0.0557 = 0.119 to 0.2233 ≈ 11% to 22%.
4	**16.16 AIDS-related risk factor**. 95% confidence interval for *p* $\tilde{n}$ = 2673 + 4 = 2677, $\tilde{p} = \frac{5+2}{2677}$ = 0.002615, $\tilde{q} = 1 - \tilde{p}$ = 1 − 0.002615 = 0.997385, $SE_{\tilde{p}} = \sqrt{\frac{(0.002615)(0.997385)}{2677}}$ = 0.0009871. For 95% confidence, use $z_{.975}$ = 1.960. 95% CI for *p* = .002615 ± (1.960)(0.0009871) = .002615 ± .001935 = (.00068 to .00454) 95% confidence interval for *p* by Wilson is (0.0008 to 0.0044)
10	**TOTAL**

* The odd-numbered exercises will not be graded for this assignment. In the future, please complete and submit *all* exercises using the techniques addressed in lecture or lab.