

MS Module 6: Inferences Based on Two Samples – homework assignment

(The attached PDF file has better formatting.)

*Homework assignment:*

Solve end of chapter problem 5 on page 484 (1<sup>st</sup> ed) / page 496 (2<sup>nd</sup> ed) / page 573 (3<sup>rd</sup> ed), showing all work. The numerical answers are in the appendix to the textbook; for the homework assignment, show how the answer is derived.

- ! For Part (a), explain if this is a lower-tailed, upper-tailed, or two-tailed test.
- ! Part (b) computes the  $p$  value; the distributions are normal and the standard deviations are known, so one may use  $z$  values despite the small sample sizes.
- ! Part (c) computes  $\beta$  (the probability of a Type II error); you need not compute the power.
- ! Part (d) computes the needed sample size (instead of the  $m = n = 10$  in the problem).