

## Responsibilities for Test 2: A Pyramid Exam

### Infinite Series, Definite and Indefinite Integrals

#### In-class Portion - Thursday, Mar 29

Alternating Series Test - Know how to identify an alternating series, how to determine whether the Alternating Series Test applies, and how to apply that test  
- Practice problems: **11.5: p 739: 11,13**

Ratio and Root Tests - Know how to apply each of the two tests - Practice Problems: **11.6: pp 745-746: 9,10,15,25**

Direct Substitution Method - Know how to apply the procedure if you know the required substitution - Practice Problems: **5.5: pp 420-421: 2,43**  
(Substitution:  $u=x+2$  in 43)

Integration by Parts Method - Know how to apply the procedure if you know the required identification of  $u$  and  $dv$  - Practice Problems: **7.1: p 480: 2,23** (Let  $u=y$  and  $dv=e^{(-2y)}dy$ )

#### Team Portion - Thursday, Mar 29 - Tuesday, Apr 3

You are responsible for all the material on the in-class portion plus

Alternating Series- know how to determine conditional convergence and absolute convergence and know how to estimate the sum of a convergent series to a desired degree of accuracy - Practice problems: **11.5: p 740: 14,27**

Direct Substitution Method - Know how to make reasoned guesses for a substitution and apply the procedure for your substitution - Practice Problems: **5.5: p 421: 34,36,57,62**

Integration by Parts Method - Know how to apply the procedure if you know the required identification of  $u$  and  $dv$  - Practice Problems: **7.1: p 480: 21,35**

Folding 1/7 Sequence - Know how to apply the 3-step folding procedure and represent the result as a sequence of estimates for  $1/7$  - Practice Problem: Start with the estimate  $1/4$  and write a recursion formula for the sequence of estimates.