

## CALCULUS THEOREM ASSESSMENT ACTIVITY

Assessment points: 30 (up to 5 bonus points available for superior work)

Objective: Working in groups of three on an assigned calculus theorem, students will create a presentation that shows their understanding of the concepts, necessary conditions, results and applications of said theorem.

### THEOREMS:

Fundamental Theorem of Calculus	p. 224
Fundamental Theorem of Calculus Part II	p. 270-271
Intermediate Value Theorem	p. 60-61
Mean Value Theorem for Derivatives	p. 211
Mean Value Theorem for Integrals	p. 510
Average Value Theorem	p. 509

### Criteria:

- Formal mathematical language for theorem.
- Informal restatement of the theorem in clear, easy to understand terms.
- Discusses the conceptual meaning of theorem in a meaningful, relevant manner.
- Includes a visual and, if at all possible, an interactive demonstration of the theorem.
- Includes two examples of the theorem in action -- one of the two must be an application situation.
- Resources consulted must be properly cited using MLA format.
- Presenters must give the impression that they are experts in their theorem, i.e. they know the theorem 'inside and out'.
- Presenters must be able to answer questions from classmates or instructor.
- Presentations will be a minimum of 6 minutes and a maximum of 10 minutes. (A 10% deduction will be taken for over/under time.) Dress one step below presentation clothes; if you don't know what that means, dress in presentation clothes. Presenters should be PREPARED. Presentations should be of 'assessment quality.' Presentations should involve audience participation in some way, shape or form.
- NO last names in your slide show. I wish to post these on my website as a review for the final exam for your fellow classmates.
- Power Point file to be saved in I:\MMSTC\Homework\Calculus Dewey\Calculus Theorem Project

Presentation: A presentation schedule will be set up and must be adhered to.  
There will be 4 presentations per day.

Resources:

- Classroom whiteboard, Elmo and interactive whiteboard will be available for use. Let me know if you would like poster board.
- My personal resource books from my home professional library will be available for use. You may copy relevant pages or check out overnight.
- Web resources. Don't forget to search You Tube or even Teacher Tube for relevant videos. However, a video should complement your presentation, not be the focus of your presentation and be limited in time. You may even 'shoot' your own video of your theorem in action, if appropriate. Also, there are many Java applets available that illustrate these theorems as well. BE CAREFUL: Many of the older Java applets don't meet the security minimums of the latest Java. TEST FIRST!

This paper must be given to me before your presentation as well as print out of screen shots or slides of your presentation (4-6 per page).

COMMENTS:

GRADE  $\overline{30}$