

# CALCULUS FOREVERS

## STATEMENTS OF DEFINITIONS AND THEOREMS:

### CHAPTER P

SLOPE  
ABSOLUTE VALUE  
TRIANGULAR INEQUALITY  
LESS THAN  
FUNCTION

### CHAPTER ONE

LIMIT (OF A FUNCTION AT A POINT)  
SANDWICH THEOREM  
CONTINUITY (AT A POINT)  
INTERMEDIATE VALUE THEOREM

### CHAPTER TWO

DERIVATIVE (GENERAL DEFINITION)  
DERIVATIVE (OF A FUNCTION AT A POINT)  
CHAIN RULE

### CHAPTER THREE

ABSOLUTE MAXIMUM	ABSOLUTE MINIMUM
LOCAL MAXIMUM	LOCAL MINIMUM
INCREASING FUNCTION	DECREASING FUNCTION
CRITICAL VALUE	EXTREME VALUE THEOREM
ROLLE'S THEOREM	MEAN VALUE THEOREM
CONCAVE DOWNWARD	CONCAVE UPWARD
INFLECTION POINT	

### CHAPTER FOUR

INDEFINITE INTEGRAL  
DEFINITE INTEGRAL  
LIMIT OF A REIMANN SUM  
MEAN VALUE THM (FOR INTEGRALS)  
FUNDAMENTAL THEOREM OF CALCULUS (PARTS 1 AND 2)

### PROOFS

1. TRIANGULAR INEQUALITY
2. LIMIT OF A CONSTANT
3. LIMIT OF A SUM
4. DERIVATIVE OF A SUM
5. PRODUCT RULE
6. CHAIN RULE
7. ROLLE'S THEOREM
8. MEAN VALUE THM
9. MEAN VALUE THM (FOR INTEGRALS)
10. FUNDAMENTAL THM OF CALCULUS (BOTH PARTS)