Be Prepared for the AP Calculus Exam 2018

Chapter 2 Limits and Continuity

2.1 The concept of a limit

p. 17 – 25 1-4

2.2 Properties of Limits

p. 29-39 7-16,18,19

2.3 Lhopitals Rule

p. 41 21

2.4 Continuity

p. 43-48 24-28

2.5 Relative Rates of Growth

p. 49-51 29,30

Limits and Continuity Worksheet

p. 53-56 1, 4-6, 8-25

Chapter 3 Derivatives

3.1 Concept and Notation

p. 57-60 1-2

3.2 Differentiation Methods

p. 62-70 3-12

3.3 Higher Order Derivatives

p. 71 13,14

3.4 Implicit Differentiation

p. 72-75 15-17

3.5 The derivative of the inverse function

p. 76-77 18,19

3.6 Differentiability and Continuity

p. 79-80 20-22

3.7 Finding Derivatives with a calculator

p. 81 23,24

Derivatives Worksheet p. 85-88 1 – 27

Chapter 4: Applications of Derivatives

4.1 Tangent and Normal Lines and Linear Approximations
p. 89-92 1-4, 6

4.2 The Mean Value Theorem
p. 92-95 7-9

4.3 Analysis of Function Graphs
p. 96-110 10-21

4.4 Modeling and Optimization
(Calculator)
p. 111-112 22-23

4.5 Related Rates
(Calculator)
p. 113-117 24, 25, 27

4.6 Distance, Velocity, Acceleration
p. 118-120 28-30

4.7 Data-Driven Problems
p. 121 31

Chapter 5 Integration

5.1 The Fundamental Theorem of Calculus
p. 123-125 Reading Only
(There are no problems to do)

5.2 Definite and Indefinite Integrals
p. 126-127 1-2

5.3 Approximating Definite Integrals with Sums
p. 128-132 3,4,6

5.5 Properties of Definite Integrals
p. 139-140 11-13

5.6 Calculating Definite Integrals with Geometry
p. 141 15

5.7 Calculating Definite Integrals
p. 143-145 17-20

5.8 Calculating Integrals with a calculator
p. 139-141 21

5.9 Finding Antiderivatives
p. 148-157 22-27, 29,30
p. 161-165 35-38, 40

5.10 Improper Integrals
p. 166-172 42,43,45

Integration Worksheet
p. 173-174 1-14,16,19-28
(Integrate 1-16,19-22, but only evaluate 2-16 even)

Chapter 6: Applications of Integrals

6.1 Overview
p. 179-180 Reading only

6.2 Finding Area
p. 181-184 1-4 (1,2 Calculator)

6.3 Volumes of Solids of Revolution
p. 185-189 5,7 (7 Calculator)

6.4 Average Value of a Function
p. 190-192 8-9 (9 Calculator)

6.5 Net Change of a Function
p. 193-195 10-13
(10 Calculator)

6.6 Motion of a particle
p. 196-198 14-16

6.7 Accumulation Functions
p. 199-201 17-19
(18,19 Calculator)

6.8 Arc Length
p. 202-203 20-21
(20 Calculator)

Chapter 7 Differential Equations

7.1 What is a differential equation
p. 205-206 1

7.2 Slope Fields
p. 206-210 2-3

7.3 Separation of Variables
p. 211-213 4-5 (5 Calculator)

7.5 Logistic Model
p. 216-219 8-9

7.6 Eulers Method
p. 220-226 10-12

Chapter 8: Parametric, Vector, and Polar Functions

8.1 Parametric Functions

p. 227-234 3-9 (7,9 Calculator)

8.2 Vector Functions

p. 235-239 10-14
(11,12,14 Calculator)

8.3 Polar Functions

p. 240-246 15-18

Chapter 9 Series

9.1 Concept of a Series
p. 247-250 Reading

9.2 Geometric Series
p. 251 1

9.3 Convergence Tests
p. 252-257 There are no problems here, but it is a great review

9.3 Applying convergence Tests
p. 257-264 2-9

9.4 Taylor and Maclaurin Polynomials
p. 264-267 10-13

9.5 Taylor and Maclaurin Series
p. 268-272 14-18

9.6 Taylors Theorem and Lagrange Error Bound
p. 273-277 19-21