Homework for Calculus II from Stewart, Edition 7

Class 1 – Appendix D: Trigonometry Review
Questions: 1-13 (odd), 17, 19, 23-33 (odd), 43-47 (odd; recall other trig identities!), 65, 69 (note: bound between 0 and 2Pi)

Class 2 – No Textbook Homework

Class 3 – Section 6.6: Inverse Trigonometric Functions
Questions: 1-9 (odd), 43 (recall how to do one-sided limits), 45 (a diagram may help!), 49 (set up equation only; for a challenge, try solving the question!)

Class 4 – Section 6.6: Inverse Trigonometric Functions
Questions: 19 & 21 (proofs), 25 & 29 (don't forget the chain rule!)

Class 5 & Class 6 – Section 6.6: Inverse Trigonometric Functions
Questions: 59-69 (odd; practice, practice, practice!), 74 (proof)

Class 7 – Section 6.7: Hyperbolic Functions
Questions: 1-17 (odd), 21, 23 (make sure you understand WHY this happens), 31-41 (odd; don't forget the CHAIN RULE!), 57, 59-67 (recall trig identities)

Class 8 & Class 9 – Section 6.7: Hyperbolic Functions
Questions: 43, 45, 46 & 47 (use class notes for assistance)

Class 10 – Section 6.8: Indeterminate Forms of L'Hopital's Rule
Questions: 1, 3, 7, 9, 15, 23, 25, 33, 35, 41, 45, 55, 57, 61, 63, 65, 69 (if you would like more practice, select more questions from 7-65)

Class 11 – No Textbook Homework

Class 12 – No Textbook Homework

Class 13 & Class 14 – Section 7.1: Integration by Parts
Questions: 1-35 (odd; be careful when choosing *u* and *dv*!);

Class 15 – Section 7.2: Trigonometric Integrals
Questions: 1 & 3 (note the powers of sin and cos), 5-47 (odd; SIMPLIFY the integral before starting it if possible!); 65 (application question)

Class 16 & Class 17 – Section 7.3: Trigonometric Substitution
Questions: 1-29 (odd), 31 (proof)

Class 18 – Section 7.4: Integration of Rational Functions by Partial Fractions
Questions: 3, 5, 7-23 (odd; don't forget to FACTOR the denominator if possible!)

Class 19 – Section 7.4: Integration of Rational Functions by Partial Fractions
Questions: 25-37 (odd), 57

Class 20 – Section 7.8: Improper Integrals
Questions: 5-37 (don't forget the CHAIN RULE IN REVERSE!), 57 & 59 (concept)

Class 21 – Section 6.3: Volumes by Cylindrical Shells
Questions: 3, 5, 7, 15-25 (odd; using horizontal rectangles)

Class 22 – Section 6.3: Volumes by Cylindrical Shells
Questions: 9, 11, 13, 15-25 (odd; using vertical rectangles)

Class 23 – Section 8.1: Arc Length
Questions: 1 (use formula 3 on page 539), 3 & 5 (SET UP only!), 7-17 (odd), 27 (c & d)

Class 24 & Class 25 – Section 10.1: Curves Defined by Parametric Equations
– Section 10.2: Calculus with Parametric Curves
Questions (10.1): 1, 3, 5-17 (odd),
Questions (10.2): 1-5 (odd), 13, 15

Class 26 – Section 10.1: Curves Defined by Parametric Equations
– Section 10.2: Calculus with Parametric Curves
Questions (10.1): 23, 25
Questions (10.2): 1, 17, 19, 37, 39

Class 27 – Section 10.2: Calculus with Parametric Curves
Questions: 41, 43, 53 (proof; hint: consider SYMMETRY)

Class 28 – Section 10.3: Polar Coordinates
Questions: 1, 3, 13 (hint: recall the formula for the length of a line), 15-25 (odd), 27, 29, 31, 35, 37, 39

Class 29 – No Textbook Homework

Class 30 – No Textbook Homework

Class 31 – Section 11.10: Taylor and Maclaurin Series
Questions: 5, 11, 15, 29-37 (odd)

Class 32 – Section 11.10: Taylor and Maclaurin Series
Questions: 47, 49, 55, 59 (hint: consider equation 11 on page 757 and equation 16 on page 759).

Class 33 – Section 14.1: Functions of Several Variables
Questions: 9-21 (odd), 27, 29

Class 34 – Section 14.3: Partial Derivatives
Questions: 13-37 (odd), 41, 63-69 (odd), 77, 99 (challenge!)

Extra Review Questions

Chapter 6 (page 457): Volume by Cylindrical Shells
Exercises: 1, 3, 7, 9, 15

Chapter 7 (page 530): Integration by Parts, Trigonometric Integrals, Trigonometric Substitution, Integration of Rational Functions by Partial Fractions & Improper Integrals
True/False: 2 & 3 (concept; very important!)
Exercises: 5, 11, 15, 19, 21, 33, 39, 41, 73,

Chapter 8 (page 575): Arc Length
Exercises: 1, 3 (a), 7 (hint: fist, take the derivative of y with respect to x by subbing in x for t; then compute the arc length as you normally would)

Chapter 10 (page 685): Curves Defined by Parametric Equations, Calculus with Parametric Curves & Polar Coordinates
True/False: 3, 5
Exercises: 1, 3, 9-13 (odd), 21, 25

Chapter 11 (page 779): Taylor and MacLaurin Series
Exercises: 47, 51
Problems Plus: 1 (challenge!)

Chapter 14 (page 967): Functions of Several Variables & Partial Derivatives
True/False: 3
Exercises: 3, 13, 15, 19, 21, 23 (hint: the question is simply asking you to show that x * [derivative of z with respect to x] + y * [derivative of z with respect to y] = x * y + z)