

**COURSE:** **PRECALCULUS (MATH -1900)**

**TEXTBOOK:** Algebra and Trigonometry (2nd Ed.) -- by Bittinger and Beecher

**SOLUTIONS MANUAL** A Student's Solution Manual (optional) is available for use in the Lab, or may be purchased in the bookstore. It contains complete solutions to the odd-numbered exercises and answers to the even-numbered exercises.

**VIDEO CASSETTES** Videotape-cassette/computer instruction for each section of your textbook is available at the Main Campuses. As you view each lesson you should take notes and ask questions as needed, the same way you would in a lecture class. As you watch, **BE SURE TO OMIT** topics as referenced below.

**COMPUTER INSTRUCTION** Internet instruction is available at the Main Campuses. The instruction is called **COURSE COMPASS** and includes interactive multimedia tutorials and videos. Although this instruction is based on a different textbook, its use is recommended.

\*\* **NOTE(1):** Step-by-step solutions to **all** required highlighted Review and Chapter-Tests exercises, as indicated below, **must** be maintained in a notebook. It is **recommended** that all exercises indicated below be completed. YOUR NOTEBOOK SHALL BE AVAILABLE FOR REVIEW BY YOUR INSTRUCTOR BEFORE AND AFTER EACH TEST. **You must bring this with you when you take a test.** Do not take a test until you are able to at least do the Chapter-Review and Chapter-Test Exercises (as indicated below) without relying on sample problems and/or answers in the back of the book.

**NOTE(2): EACH TEST WILL INCLUDE SOME PROBLEMS BASED ON PREVIOUS UNITS STUDIED.**

**NOTE(3):** A scientific calculator supplied by the Math Lab may be used when testing; note that for some questions **exact** answers (not calculator approximations) will be required.

**NOTE(4):** Answers to all exercises specified below are found in the back of the book.

**NOTE(5):** Some exercises may require the knowledge of certain topics from prerequisite courses in algebra and/or trigonometry; although such topics have been omitted, you may want to review them as needed.

**NOTE(6):** TO BE ABLE TO FINISH YOUR COURSE ON TIME, YOU SHOULD COMPLETE THE REQUIRED MATERIAL FOR A TEST AND PASS EACH TEST BEFORE EACH GUIDELINE (NOT DEADLINE) DATE INDICATED.

**NOTE(7):** It is your responsibility to check the Math Lab bulletin board and hand in an attendance slip each time you attend the Lab (including testing).

2010	TITLE	WATCH	READ	DO
		SECTION VIDEOS	PAGES	HOMEWORK EXERCISES AT END OF EACH SECTION
<b>TEST 1</b> Should be taken during the week of <b>Sep. 20</b>	The Complex Numbers	2.4	89-97	5,9,11,19,27,33,43-51 odd, 61,69,75,79
	Quadratic Equations	2.5	97-105	11,25,39,63,73,75,91,96C (Ans.: $x^2-4x+29=0$ )
	Equations Reducible to Quadratics	2.8	115,116	
	<b>**Chapter Test 2</b>		<b>127-128</b>	<b>1-17,25</b>
	Graphs of Equations	3.1	129-138	26,29-35 odd, 41,43,47,51-57 odd
	Functions	3.3	144-152	1-11 odd, 17-31 odd, 35
	Graphs and Applications of Functions	3.5	166-178	1,3,5,9,11,15-43 odd, 47,59-67 odd
	Symmetry	3.6	179-189	1,3,7,15,21,29,31,33,39,45
	Combination of Functions	3.7	189-197	1,3,5,9,11,13,17,25,31,53
	Transformations of Functions	3.8	197-204	1-31 odd
	<b>**Summary and Review 3</b>		<b>205-207</b>	<b>1-3,5,7,8,20-22 (omit e), 27,30,31-39 odd, 53-61 odd, 63a</b>
	<b>**Chapter Test 3</b>		<b>207-209</b>	<b>1-5,7-16,28,29-31 (a,c,e), 32-36,38</b>
<b>TEST 2</b> Should be taken before or during the week of <b>Oct. 4</b>	The Distance and Midpoint Formula	3.2	138-141 143	1,3,5,7,9,13,15,17
	Lines and Linear Functions	3.4	153-165	1,9,15,21,25,31,37,39,41,45,51,61
	Quadratic Functions	4.1	211-222	1,5,7,13,15,19,21,25,33,43
	Sets, Sentences, and Inequalities	4.2	224-229	7,9,13,15,27,35,51
	Polynomial and Rational Inequalities	4.4	235-240	1,3,7,21,25,31,33,37,71,73
	Graphs of Polynomial Functions	4.5	240-246	9,11,17
	Division of Polynomials	4.6	247-252	1,3,5,15,25,31,35
	Theorems about Roots	4.7	253-261	1,3,7-11 odd, 15,17,21-27 odd, 31,37
	Rational Functions	4.9	268-278	1,5,7,13,19,21
		<b>**Summary and Review 4</b>		<b>279,280</b>
	<b>**Chapter Test 4</b>		<b>281</b>	<b>1-6,11-25,29</b>
			See NOTE (2).	

2010	TITLE	SECTION VIDEOS	PAGES	HOMEWORK EXERCISES AT END OF EACH SECTION
<b>TEST 3</b> Should be taken before or during the week of <b>Oct. 18</b>	Inverses of Relations and Functions	5.1	283-294	7,13,15,17,41,47,55,67,69,73,75,77,83
	Exponential Functions	5.2	294-302	1,13,21,23,35
	Logarithmic Functions	5.3	303-309	1,7,19,31,35,47,57,59,67,73,75,81,89
	Properties of Logarithmic Functions	5.4	310-317	1,7,9,11,17,21,25,31,33,43,49,57,61,63
	Finding Log. Functions Val. on a Calc.	5.5	317-322	1,21,23,31,39,57,61
	Graphs of Exponential Functions with Base e and Applications	5.6	322-326	1,5,13,21
	Solving Exponential & Log. Equations	5.7	327-331	1,5,13,21,31,37,49,55
	<b>**Summary and Review 5</b>		<b>349,350</b>	<b>1,3-5,7,10,15,17,18,19,23,28,31,33,44</b>
	<b>**Chapter Test 5</b>		<b>351</b>	<b>1-21,23,26,37</b>
	Graphs of Basic Circular Functions	6.5	405-427	3,5,7,13,15,17,23,41,43,47,49,59,75,79
Graphs of Trans. Sin & Cosine Functions	6.6	428-440	1,17,21,25,31,43	
<b>**Summary and Review 6</b>		<b>447,448</b>	<b>43,44,47,50-54,57,59,60</b>	
<b>**Chapter Test 6</b>		<b>448,449</b>	<b>8,11,30,31,32,40-44</b>	
Trig. Manipulations and Identities	7.1	451-457	7,21,23,33,37,45,49,59,63,73	
			<b>See NOTE (2).</b>	
<b>TEST 4</b> Should be taken before or during the week of <b>Nov. 1</b>	Sum and Difference Identities	7.2	458-465	1,7,9,15,19,21,27,29,35,43,45,47
	Co-function & Related Identities	7.3	465-470	5,9,11,13,19,31
	Some Important Identities	7.4	471-477	3,5,11,15,19,23,29,31,33,37
	<b>NOTE (8):</b> All of the Identities on Page 478 and 479, except the Basic Identities, will be provided for this test.			
	Proving Trigonometric Identities	7.5	478-485	5,9,13,17,21,25,37,45,53, [Pg. 483, Omit Sum-Product Identities.]
	Inverses of the Trigonometric Functions	7.6	486-492	1,5,7,9,15,25,31,35,59,69
	Trigonometric Equations	7.8	498-503	1,3,9,13,29
	<b>**Summary and Review 7</b>		<b>508,509</b>	<b>1,3,5,7,9,10,15-20,23,25,26</b>
	<b>**Chapter Test 7</b>		<b>509,510</b>	<b>1,4,6,9,12,13,17-23,26</b>
	Vectors and Applications	8.3	526-534	1,7-15 odd, 21-31 odd,37,49,51; also 3 on pg. 529.
Polar Coordinates	8.4	534-540	1,13,19,25,31,37,47,51,55,59,65,69,73	
Complex Numbers	8.5	541-546	5,13,15,19,21,23,29	
DeMoivre's Theorem	8.6	547-551	1,5,7,13,17,19,21,23	
<b>**Summary and Review 8</b>		<b>551,552</b>	<b>7,9,10,12,13,15,17, 18, 23, 25, 26, 27, 29, 31</b>	
<b>**Chapter Test 8</b>		<b>552,553</b>	<b>5-19</b>	
			<b>See NOTE (2).</b>	
<b>TEST 5</b> Should be taken before or during the week of <b>Nov. 15</b>	Systems of Equations in Two Variables	9.1	555-564	5,7,9,13-25 odd, 29,35,41
	Systems of Equations in 3 or More Variables	9.2	565-571	3,5,7,11,23,25,27
	Special Cases of Systems	9.3	572-579	1,3,5,9,15,17,19,23,25
	Matrices	9.4	579-590	1,3,7,11,13-35 odd, 39
	Determinants and Cramer's Rule	9.5	590-602	1,5,7,9,11,15,31,33,37,43,49,57, [Pg. 598, Omit (c): Factoring Determinants.]
	Inverses of Matrices	9.6	603-608	1,5,7,17,21
	<b>**Summary and Review 9</b>		<b>626-628</b>	<b>1,5,7,8,13-15,20,21,24,26,27,30,33,35,36,38,40,47</b>
<b>**Chapter Test 9</b>		<b>628,629</b>	<b>1-3,5,7,9,12,14,15,19,23,25,26,28,29,31,34</b>	
			<b>See NOTE (2).</b>	
<b>TEST 6</b> Should be taken before or during the week of <b>Nov. 29</b>	Circles	3.2	141-143	21-27 odd,33,35,43-49 odd,53,55
	Conic Sections: Lines & Ellipses	10.1	631-643	1,5-11 odd,15,23-29 odd,35,37a,37b
	Conic Sections: Hyperbolas	10.2	644-650	1,3,7,15,19,21,27,29,31
	Conic Sections: Parabolas	10.3	651-658	1,3,7,9,13,15,19,23-33 odd, 37,39
	Systems of 1st & 2nd Degree Equations	10.4	659-664	1,3,5,9,13,17,21,23,27,29,33,35,41
	Systems of 2nd Degree Equations	10.5	664-669	1-9 odd, 17, 25-29 odd, 39,41
	<b>**Summary and Review 10</b>		<b>669,670</b>	<b>1-17, 19-27 odd, 29-35 odd</b>
<b>**Chapter Test 10</b>		<b>670,671</b>	<b>1-21</b>	
			<b>See NOTE (2).</b>	