MAT 1375 - Precalculus

Textbook: "*Precalculus*" by Thomas Tradler and Holly Carley, Second Edition, available on www.lulu.com
PDF available from: http://websupport1.citytech.cuny.edu/faculty/ttradler/precalculus.html
WeBWorK: WeBWorK for MAT 1375 uses the OpenLab Q&A site: https://openlab.citytech.cuny.edu/ol-webwork/
Students will need an OpenLab account in order to post new questions.

Session	**Topic**	**Homework**	**WeBWorK Set**
1	1. The Absolute Value	1.1, 1.2, 1.3 (a)-(e), 1.4 (a)-(f), 1.6, 1.7 (a)-(f)	Absolute Value Inequalities Interval Notation
2	2. Lines and Functions	2.1 (a)-(c), 2.3 (a)-(c), 2.5-2.8 all	Lines Review
3	3. Functions by Formulas and Graphs	3.1 (a)-(b), 3.2, 3.4 (a)-(f), 3.6 (a)-(f), 3.7 (a)-(g) and (m)-(t), 3.8, 3.9	Functions - Function Notation Functions - Difference Quotient Functions - Piecewise
4	4. Introduction to the TI-84	4.1, 4.2 (a), 4.3 (c)-(i), 4.6	
5	5. Basic Functions and Transformations	5.1, 5.2 (a)-(f), 5.3 (a)-(d), 5.5 (a)-(e)	Functions - Translations Functions - Symmetries
6	6. Operations on Functions	6.1 (a)-(c), 6.2 (a)-(b), 6.3 (a)-(d), 6.4 (a)-(c), 6.5 (a)-(b), 6.6, 6.7	Functions - Operations
7	7. The Inverse of a Function	7.1 (a)-(c), 7.2 (a)-(f) and (l)-(p), 7.3 (a)-(c), 7.4 (a)-(c), 7.5 (a) and (d)	Functions - Inverse Functions
8	**First Examination**		
9	8. Dividing Polynomials (8.3 Synthetic Division is *optional*)	8.1 (a)-(c) and (j)-(k), 8.2, 8.3, 8.4 (a)-(d) (*optional*: 8.5 (a)-(d))	Polynomials - Division
10	9. Graphing Polynomials (9.3 Graphing Polynomials by Hand is *optional*)	9.1-9.3 all, 9.4 (a)-(c), 9.5 (a)-(c) (*optional*: 9.6)	Polynomials - Graphs
11	10. Roots of Polynomials (10.1 Rational Root Theorem is *optional*)	10.2 (a)-(d), 10.3 (a)-(c), 10.4 (a)-(c) and (f)-(h), 10.5 (a)-(c) and (f)-(i) (*optional*: 10.1)	Polynomials - Rational Roots Polynomials - Theory
12	11. Rational Functions (11.2 Graphing Rational Functions by Hand is *optional*)	11.1-11.4 all	Rational Functions - Domains Rational Functions - Asymptotes Rational Functions - Intercepts Rational Functions - Comprehensive
13	12. Polynomial and Rational Inequalities	12.1 (a)-(c), 12.2 (g)-(j), 12.4 (a)-(f), 12.5	Polynomials - Inequalities Rational Functions - Inequalities
14	13. Exponential and Logarithmic Functions	13.1 (a)-(f), 13.2 (a)-(e), 13.4, 13.5 (a)-(b), 13.6 (a)-(h)	Exponential Functions - Graphs Logarithmic Functions - Graphs
15	**Midterm Examination**		

Session	Topic	Homework	WeBWorK Set
16	14. Properties of Exp and Log	14.1 (a)-(e), 14.2 (a)-(f), 14.3 (a)-(c) and (e), 14.4 (e)-(g), 14.5 (a)-(e)	Logarithmic Functions - Properties Exponential Functions - Equations Logarithmic Functions - Equations
17	15. Applications of Exp and Log	15.1 (a)-(b), 15.3-15.8 all	Exponential Functions - Growth and Decay
18	16. Half-life and Compound Interest	16.1-16.7 all, 16.9 (a)-(c), 16.10 (a)-(e)	Exponential Functions - Growth and Decay
19	17. Trigonometric Functions	17.1 (a)-(d) and (g)-(h), 17.3, 17.4, 17.5 (a)-(d), 17.6 (a)-(g)	Trigonometry - Unit Circle Trigonometry - Graphing Amplitude Trigonometry - Graphing Period Trigonometry - Graphing Phase Shift Trigonometry - Graphing Comprehensive
20	18. Addition of Angles and Multiple Angle Formulas	18.1 (a)-(e), 18.2 (a)-(b), 18.3 (a)-(d), 18.4 (a)-(d)	Trigonometry - Sum and Difference Formulas Trigonometry - Double and Half Angle Formulas
21	19. Inverse Trigonometric Functions	19.1, 19.2 (a)-(j), 19.3 (a)-(c) and (g)-(i)	Trigonometry - Inverse Functions
22	20. Trigonometric Equations	20.1 (a)-(d), 20.2 (a)-(b), 20.4 (a)-(k), 20.5 (a)	Trigonometry - Equations
23	**Third Examination**		
24	21. Complex Numbers	21.1 (a)-(c), 21.2 (b)-(e), 21.3 (a)-(c), 21.4 (a)-(d), 21.5 (c)-(d), 21.6 (a)-(d), 21.7 (a)-(d)	Complex Numbers - Operations Complex Numbers - Magnitude Complex Numbers - Direction Complex Numbers - Polar Form
25	22. Vectors in the Plane	22.1 (a) and (d), 22.2 (a)-(d), 22.3 (b)-(f) and (k)-(m), 22.4 (a)-(b)	Vectors - Operations Vectors - Components Vectors - Magnitude and Direction Vectors - Unit Vectors
26	23. Sequences and Series	23.1 (a)-(c), 23.3 (a)-(d), 23.4 (a)-(d), 23.5 (a)-(b), 23.7 (a)-(b) and (e)-(i)	Sequences - Intro Series - Intro Sequences - Arithmetic Series - Finite Arithmetic
27	24. The Geometric Series	24.1 (a)-(d), 24.2 (a)-(c), 24.3 (a)-(b) and (e)-(i), 24.4 (c) and (f)-(i), 24.5 (a)	Sequences - Geometric Series - Geometric
28	25. The Binomial Theorem	25.1 (a) and (i)-(l), 25.2 (b), 25.3 (a)-(d), 25.4 (a)-(d), 25.5 (a)-(d), 25.6 (a)-(d)	Sequences - Binomial Theorem
29	**Review**	Final Exam Review Problems Selected questions solved	
30	**Final Exam**		