

## MATH 190

### Schedule of Lectures, Assignments, and Exams\* as well as Course Journal

The course is based on the textbook *Reconceptualizing Mathematics* by Sowder, Sowder, Nickerson from FREEMAN publishers.

#### Legend:

READINGS refers to assigned reading material posted on WebCT

EXPLOR... refers to activities posted on WebCT that you should explore on your own prior inclass explorations

material refers to an assigned article, lecture excerpt, or textbook section

**R** you thoughtfully had a first read through the material

**W** you worked the material in your second/third read through by highlighting pertinent information and crossreferencing materials

**S** you summarized the material to 1-2 paragraphs that may be accompanied by a diagram

**I** you individually worked through the exploration to the best of your abilities

**Q** you visited the Q Workshop or alternatively met with your group to get help with the exploration

**L** you prepared all materials necessary for the exploration to bring to the lecture

QUIZ refers to an inclass quiz that is held at the beginning/end of the lecture about material and assignments from the previous week

Set stand for online assignment through LonCapa

HW stands for homework, which is a group activity

**X** means this category is not applicative to the item listed

WEEK	LECTURES*	READINGS*	R	W	S	EXPLORATIONS*	I	Q	L	DUE	QUIZ
1	Course information	Course outline			X	Survey		X	X		
	Expectations	Schedule & Journal		X	X						
	Problem solving part 1	Expectations									
	Article <i>Knowing Mathematics ...</i>	Article <i>Knowing ...</i>									
	Survey					REFLECTION		X	X		
	Article <i>Teacher Anxiety</i>	Article <i>Teacher ...</i>									
	Problem solving part 2	Article <i>16 Habits ...</i>									
	visit with WebCT and LonCapa	HW Guide		X	X						
	Article 16 Habits of Mind	Participation & Reflection		X	X						
	Participation & Reflection					REFLECTION		X	X		
2	Ch. 1 Reasoning About Quantities	Section 1.1,3-4								Jan 12 Set 1	
		Section 1.2									
		Ch. 1 Excerpts									
		Article <i>How Math Makes ...</i>		X	X	REFLECTION		X	X		
	Ch. 2 Numeration Systems Part 1 OH multibase cutouts	Section 2.2				Grouping for Bases	X	X			Q 1
		Section 2.3									
		Article <i>Modular Arithmetic</i>		X	X					Jan 13 HW 1	
		Ch. 2 Excerpts Part 1				REFLECTION		X	X		
3	Ch. 2 Numeration Systems Part 2 OH multibase cutouts <b>Workshop</b> ModArt	Section 2.4				Grouping for Bases	X	X			
		Section 2.5				Workshop ModArt					
		Ch. 2 Excerpts Part 2					Jan 19 Set 2				
						REFLECTION			X	X	
	Ch. 3 Whole Number ... Part 1 conceptualization + and - <b>Movie</b> Ma and Pa Kettle	Sections 3.1-3									Q 2
		Ch. 3 Excerpts Part 1									
		conceptualization + and -								Jan 20 HW 2	
						REFLECTION		X	X		

WEEK	LECTURES*	READINGS*	R	W	S	EXPLORATIONS*	I	Q	L	DUE	QUIZ	
4	Ch. 3 Whole Number ... Part 2 OH LE5 42 divided by 7 conceptualization * and / Article <i>BCAMT Numeracy</i> Article BC Ministry Elementary ... Article BC Ministry Secondary ... <b>Movie</b> Abbott and Castello OH Graph Paper	Sections 3.4-6				Graph Paper	X	X		Jan 26 Set 3		
		Ch. 3 Excerpts Part 2										
		conceptualization * and /										
		Article <i>BCAMT Numeracy</i>		X	X							
		Article BC Ministry Element...		X	X							
		Article BC Ministry Second...		X	X							
		Number Sense Excerpts										
			REFLECTION						X			X
	Counting & Choices <b>Movie</b> The Story of One	Ch. 4-5 Excerpts				BBC The Story of One		X	X	Jan 27 HW 3	Q 3	
REFLECTION						X	X					
5	MIDTERM 1											
	Ch. 11 Number Theory OH Eratosthenes' Sieve	Section 11.1				Eratosthenes' Sieve				Feb 4 Set 4		
		Section 11.2-3										
		Section.4										
		Ch. 11 Excerpts				REFLECTION		X	X			
6	<b>Workshop</b> Fraction Kit Fraction Target OH Thoughts About Problem ...	Section 6.1				Workshop: Fraction Kit						
							Fraction Target					
							REFLECTION		X			X
	Ch. 6 Meanings for Fractions Part 1	Section 6.2				Pattern Blocks	X	X		Feb 10 HW 4	Q 4	
		Ch. 6 Excerpts Part 1										
		REFLECTION						X	X			

WEEK	LECTURES*	READINGS*	R	W	S	EXPLORATIONS*	I	Q	L	DUE	QUIZ
7	Ch. 6 Meanings for Fractions Part 2	Section 6.3				Pattern Blocks	X	X		Feb 16 Set 5	
		Section 6.4									
		Section 6.5									
		Ch. 6 Excerpts Part 2				REFLECTION		X	X		
	OH Meanings for Fractions Ch. 7 Computing with Fractions OH Fraction Pictorially	Sections 7.1-3				Meanings for Fractions				Feb 17 HW 5	Q 5
		Section 7.4									
		Ch. 7 Excerpts									
					REFLECTION		X	X			
Feb 21-25	University is closed due to Reading Break										
8	Ch. 8 Multiplicative Reasoning	Sections 8.1-2									
		Section 8.3									
		Ch. 8 Excerpts									
					REFLECTION		X	X			
	Ch. 9 Ratio, Rates, Proportions, ...	Sections 9.1-3				Percent Grid	X	X		Mar 3 HW 6  Mar 4 Set 6	Q 6
		Section 9.4									
		Ch. 9 Excerpts									
					REFLECTION		X	X			
9	MIDTERM 2										
	Ch. 17 Polygons OH Angle Sum of Polygons	Sections 17.1-3				Angle Sum of Polygons	X	X		Mar 11 Set 7	
		Section 17.4									
		Conjectures									
		Ch. 17 Excerpts				REFLECTION		X	X		

WEEK	LECTURES*	READINGS*	R	W	S	EXPLORATIONS*	I	Q	L	DUE	QUIZ	
10	Ch. 16 Polyhedra	Sections 16.1-4				Polyhedra Nets assembled!						
	OH Dot paper	Section 16.6				Dot Paper	X	X				
	OH E-V-F	Ch. 16 Excerpts				E-V-F						
		Geometric Glossary				REFLECTION		X	X			
	<b>Workshop</b> Platonic Solids	Section 16.5				Platonic Solids	X	X		Mar 17	Q 7	
		OH Rotating Cubes	Platonic Solids Excerpts				Platonic Solids Nets					HW 7
							Rotating Cubes					Mar 18
							REFLECTION		X	X		Set 8
11	Ch. 18 Symmetry	Sections 18.1-2				Symmetry						
	OH Symmetry	Section 18.3				Cube: Planes of Symmetry						
	OH Cube: Planes of Symmetry	Ch. 18 Excerpts										
						REFLECTION		X	X			
	Ch. 22 Transformations	Sections 22.1-3				Ch. 22 Activity 1				Mar 24	Q 8	
		OH Ch. 22 Activity 1	Sections 22.4-5							HW 8		
		OH Rigid Motions	Sections 22.5-6							Mar 25		
		Ch. 20 Scale Factor & Similarity	Ch. 22 and 20 Excerpts				REFLECTION		X	X		Set 9
12	Ch. 23 Measurement Basics	Sections 23.1-3								Mar 28		
	<b>Movie</b> Flatland: the Movie	Ch. 23 Excerpts				REFLECTION		X	X	Set 10		
	Ch. 24 Area, Surface Area, Volume	Sections 24.1-3								Mar 31	Q 9	
	Ch. 25 Measurement Formulas	Sections 25.1-3								HW 9		
	Ch. 26 Pythagoras' Theorem ONLY	Section 26.1								Apr 1		
		Ch. 24-26 Excerpts				REFLECTION		X	X	Set 11		
	13	<b>Workshop</b> Tessellations Part 1					Workshop Tessellations				Apr 4	
Grade Reflection & Participation										Set 12		
<b>Workshop</b> Tessellations Part 2										Apr 7	Q 10	
										HW 10		

\* SUBJECT TO CHANGE