Text: <u>Reconceptualizing Mathematics Part III</u> Custom First Edition by Sowder, Sowder, and Nickerson, W.H. Freeman, 2010

Materials needed for the course: graph paper, isometric dot paper, ¼ ´´ dot paper, unlined paper, cm ruler, protractor, and scissors. Bring these with you <u>every day</u> to class. Be responsible and do not rely on someone else to do this for you. Also needed: stapler, tape, and compass.

Follow instructions written here in addition to instructions in the text. Math 13900 web page: www.math.purdue.edu/MA13900

Lesson	Section	Page	Problems
1	16.1	p373	1, 2, 3, 4, 5ab(draw front, right, top, and left for each), 6(use the dot paper in the text and then make a photocopy) Also do p375 Activity 3 – follow the instructions and <u>bring the kit with you for L2</u> along with the worksheet for L2.
2	16.2	p377	1, 2b, 3, 4, 5bc, 6ab, 7a, 9, 10, 13, 14
3	16.3	p383	3, 4abc, 5cd, 7, 10ac, 13(use <u>graph</u> paper to draw all possible pentominoes; determine the perimeter of each; answer all questions), 14, 16a, 19bc

No class on Monday, August 27th

| 4 | 16.4 | p389 | 1, 3, 4, 6, 9(draw a LARGE quadrilateral with no equal sides or angles; draw the second figure upside down) |

L5: Bring your kit of shapes.

5	16.5	p392	1bdfhjl, 4ac, 6, 7b(count F,V,E for first figure), 9ab, 10(draw a total of 4)
6	17.1	p402	1bdgi, 2bdfhjlnp, 3a, 4cd, 5, 6cd, 7def, 9 (make a table for 3, 4, 5, 6, 7, 8, 10, 12, 20, and n-sided polygons)
7	17.1/2	p405	12abcdek, 13, 14abcden, 15, 16c(make a table similar to ex9), 18bdfh
		p409	1(redraw Venn diagram correctly), 2bdfhjln, 3bd(shared characteristics), 4bdf
8	17.3	p415	2(copy and complete chart), 3bde, 4b(draw <u>large</u> scalene triangle on unlined paper; measure all angles and sides(cm) after following instructions, 6bc, 8a(find 4 more examples that work and show arithmetic to verify)
9	18.1	p426	1, 4bdf, 5bde, 6, 7bd, 8bde, 11, 12

L10: Bring kit.

| 10 | 18.2 | p431 | 2bd, 3bd, 4(number the 6 VERTICES of your shape and list the vertices that the plane or axis will go through), 5c, 6(two separate drawings for ea), 7, 8, 9 |

Exam 1   Monday, September 17, 2012 at 8:00 pm in WTHR 172

| 11 | 19.1 | p441 | 2c*(show two distinct tessellations), 3a(start with a 3cm square, use both methods (p440) on the same square, and make 8 copies of your figure to show that it tessellates), 4*, 6a, 7*(use the "w" pentomino) *NOTE: use graph paper |

L12: Bring kit.

12	19.2/20.1	p445	2, 3abc; p454 5*, 6*(*use a vertex for center point), 22
13	20.1	p454	1b, 2, 3, 8ab, 9bd, 10a(show example), 15bd, 17def, 19bdfh
14	20.2	p462	1, 3bd, 4ad(also ratio of areas), 5abcd, 6, 7

L15: Print off and bring worksheet for L15.

| 15 | 20.3 | p467 | 4*, 5*(*list dimensions in increasing order), 6, 8, 9, 11, 12, 16, 18ac, 22, 23 |

L16: Bring a compass from now on.

| 16 | 21.1 | p478 | 1, 2(use 4cm circle), 3a, 4(draw figure for b – show lines of symmetry, pts of rotational symmetry), 5cdg(use 4cm circles), 6(f is 180°), 8XY |
| 17 | 21.1 | p479 | (unlined paper)9(large triangle), 10ac, 11a, 12d, 13bd, 15b, 16cd, 19, 20c, 21bd |

L18 Print off and bring worksheet for L18. Bring cone and cylinder from kit and tape.

| 18 | 21.2 | p486 | 1, 2, 3bc, 4ab, 6bd, 7, 8, 9 |
| 19 | 22.1 | p492 | 1, 2, 3, 4, 7(make 7 distinct shapes – put matching sides of triangles together) |

Exam 2   Tuesday, October 16, 2012 at 8:00 pm in WTHR 172

| 20 | 22.2 | p496 | (two kinds of dot paper needed) 2bce, 4, 5abce, 6abce, 7, 8, 10 |

L21 Print off and bring worksheet for L21.

| 21 | 22.3 | p502 | (unlined paper and dot paper) 2, 3ad, 4, 5, 6 |
| 22 | 22.4 | p507 | 1, 2(use a non-symmetrical figure)bd f(if a>b) h, 4bdf, 5(copy paper), 6b, 7(just name rigid motion), 8, 9a, 13bdf, 16(first part only) |

L23 Print off and bring worksheet for L23.

| 23 | 22.5 | p513 | 1, 2b, 3, 4, 5ac, 6, 8, 10, 11b, 12(no right angles) |

L24 Bring tape.

24	22.6	p516	1(google "cross section of a pear" and make 2 drawings/each), 2, 4(label pictures 1, 2, 3 for reference), 5(create a core without rotation symmetry and then create your pattern by rotating it), 8
	23.1	p523	1bdfhj, 2bdfhj, 4bcfhjln, 5bdf, 6b, 8bcd, 9efgh, 10
25	23.1	p524	12(no exp), 13, 14acd, 15, 16bdfh, 17bd, 18bd, 19, 22bdf, 23, 25
26	23.2	p532	1c, 3, 4, 5, 6bdhi, 7a(name 10)c(name6), 9, 12, 14, 16bdfh, 17, 18ac, 20
27	23.2	p535	22b, 24, 25bdf, 26defg, 27bcd, 31, 34a, 35, 39bdf, 40bdf, 41b, 42a, 43
28	24.1	p553	3, 5bdfh, 6ab, 7b, 9bd, 11bd, 12bdfhj, 13b, 14b, 15a, 16, 17, 21a, 26, 28d
29	24.2	p561	1bdfjl, 2bd, 3bdf, 4ac, 6, 7bd, 8bc, 9b, 10bd, 12, 14b, 17, 19bdfhjl, 21bd
30	24.3	p567	1,2
	25.1	p575	2bd, 3, 4b, 5, 6, 8b, 9bce, 14, 16ab, 17, 18bdfh

Exam 3   Wednesday, November 14, 2012 at 8:00 pm in WTHR 172

L31 Print off and bring worksheet for L31.
**Sosa's class will meet in BRNG B286 and Ward's class will meet in MTHW 301 on Mon, Nov 19th

| **31 | 25.1 | p578 | 18ijkl, 19b, 21acfg, 23ab, 24b, 25bd, 26, 29, 35, 37(let r = 10, 13) |

L32 Bring shape I from kit.

32	25.2	p586	2, 3ac, 4, 5, 7, 8, 10, 12
33	25.2	p588	13, 16, 18bd, 20, 21, 22bd
	26.1	p597	1bc, 2, 3bdf(exact answer only), 4bd, 6bd
34	26.1	p598	7, 8, 9(exact answer only), 10a, 13abcde, 14b, 15bc, 17, 18bd, 20ab, 22, 23
35	26.2	p606	4bc, 9, 10ac, 11, 12, 13ab, 15b, 16ab, 18a, 19c, 20, 23bde, 24b, 25, 27b

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