Math 13900 Assignment Sheet Fall 2013

Text: Reconceptualizing Mathematics Part III 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 every day 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 bring the kit with you for L2 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 graph paper to draw all possible pentominoes; determine the perimeter of each; answer all questions), 14a, 16a, 19bc
			No class will be held on Monday, August 26, 2013
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 large 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 16, 2013 at 8:00 pm in LILY 1105

No class on Wednesday, September 18, 2013

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^o), 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 Monday, October 14, 2013 at 8:00 pm in LILY 1105

No class on Wednesday, October 16, 2013

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	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

Exam 3 Tuesday, November 12, 2013 at 8:00 pm in LILY 1105

No class on Wednesday, November 13, 2013

30	24.3	p567	1,2
	25.1	p575	2bd, 3, 4b, 5, 6, 8b, 9bce, 14, 16ab, 17, 18bdfh

***We will meet on Monday, November 18, 2013 in SC 179 at our regular time. Print off and bring worksheet for L31.*

**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

Math 13900 web page: www.math.purdue.edu/MA13900