Math 13900 Assignment Sheet Spring 2016

Text: Reconceptualizing Mathematics 2nd Edition by Sowder, Sowder, Nickerson, W.H. Freeman, 2014

Materials needed for the course: graph paper, isometric dot paper, ¼in. 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	p378	1bdgi, 2bdfhjlnp, 3a, 5, 6cd, 7def, 9 (make a table for 3, 4, 5, 6, 7, 8, 10, 12, 20, and n-sided polygons)
2	16.1/2	p380	11abcdek, 13, 14abcdef, 15, 16c(extend the table), 18bdfh
		p384	1(redraw Venn diagram correctly), 2bdfhjln, 3bd(shared characteristics), 4bdf
3	16.3	p389	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)
4	17.1	p399	1, 2, 3, 4, 5ab(draw front, right, top, and left for each), 6ab(use the dot paper in the text and then make a photocopy) Also do p401 Activity 3 – follow the instructions and bring the kit with you for L5 along with the worksheet for L5.
	L5: Bring your kit of shapes.		
5	17.2	p403	1, 2b, 3, 4, 5bc, 6ab, 7a, 9, 10, 13, 14
6	17.3	p410	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
7	17.4	p415	1(shade 2 cubes to right in I and 2 cubes on top in II), 3, 4, 6, 9(use unlined paper to draw a LARGE quadrilateral with no equal sides or angles; draw the second figure upside down)

No class will be held on Friday, January 29, 2016 ☺

8	17.5	p418	1bdfhjl, 4ac, 6, 7b(count F,V,E for first figure), 9ab, 10(draw a total of 4)
9	18.1	p426	1, 4bdf, 5bde, 6, 7bd, 8bde, 11, 12
	L10: Bring kit.		
10	18.2	p431	2bd, 3bd, 4(Label one vertex 'A'; its opposite vertex 'B'; and the remaining vertices 'CDEF'. Use those to list the vertices or edges or faces that the plane or axis will go through), 5c, 6(two separate drawings for ea), 7, 8, 9

Exam 1 Monday, February 8, 2016 at 8:00 pm in SMTH 108

No class will be held on Wednesday, February 10, 2016

11	19.1	p439	2c*(show two distinct tessellations), 3a(start with a 3cm square, use both methods (p438) 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	p442	2, 3abc; p450 5a*, 6a*(scalene)(*use a vertex for center point), 22
13	20.1	p450	1b, 2, 3, 8ab, 9bd, 10a(show example), 15bd, 17def, 19bdfh
14	20.2	p458	1, 3bd, 4ad(also ratio of areas), 5abcd, 6, 7
	L15: Print off and bring worksheet for L15.		

15 20.3 p463 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 p474 1, 2(use 4cm radius), 3a, 4ab(draw figure for b – show lines of symmetry, pts of rotational symmetry), 5cdg(use 4cm radius for each), 6(f is 180^o), 8XY
17 21.1 p476 (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; scissors and tape.
18 21.2 p482 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)

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.

Exam 2 Monday, March 7, 2016 at 8:00 pm in SMTH 108

21 22.3 p502 (unlined paper and dot paper) 2, 3ad, 4, 5, 6
L22 Print off and bring 3 worksheets for L22.

No class will be held on Friday, March 11, 2016

22 22.4 p507 1, 2(use a non-symmetrical figure)bd f(if a>b) h, 4bdf, 5(unlined 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 p512 1, 2b, 3, 4, 5ac, 6, 8, 10, 11b, 12(no right angles)
L24 Bring centimeter grid paper and tape. Look for the grid paper on the 13900 web page.
24 22.6 p515 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), 7
23.1 p521 1bdfhj, 2bdfhj, 4bcfhjln, 5bdf, 6b, 8bcd, 9efgh, 10
25 23.1 p521 12(no exp), 13, 14acd, 15, 16bdfh, 17bd, 18bd, 19, 22bdf, 23, 25
26 23.2 p529 1c, 3, 4, 5, 6bdhi, 7a(name 10)c(name6), 9, 12, 14, 16bdfh, 17, 18ac, 20
27 23.2 p532 22b, 24, 25bdf, 26defg, 27bcd, 31, 34a, 35, 39bdf, 40bdf, 41b, 42a, 43
28 24.1 p549 5bdfh, 6ab, 7b, 9bd, 11bd, 12bdfhj, 13b, 14b, 15a, 16, 17, 21a, 26, 28d
29 24.2 p556 1bdfjl, 2bd, 3bdf, 4ac, 6, 7bd, 8bc, 9b, 10bd, 12, 14b, 17, 19bdfhjl, 21bd
30 24.3 p564 1,2
25.1 p571 2bd, 3, 4b, 5, 6, 8b, 9bce, 14, 16ab, 17, 18bdfh

Exam 3 Monday, April 11, 2016 at 8:00 pm in SMTH 108
No class will be held on Wednesday, April 13, 2016

***We will meet on Friday, April 15, 2016 in a computer lab, BRNG B286 for lesson 31.*

**31	25.1	p573	18ijkl, 19b, 21acfg, 23ab, 24b, 25bd, 26, 29, 35, 37(let r = 10, 13)
L32 Bring shape I from kit.			
32	25.2	p581	2, 3a, 4, 5, 7, 8, 12
33	25.2	p582	13, 16, 18bd, 20, 21, 22bd
	26.1	p591	1bc, 2, 3bdf(exact answer only), 4bd, 6bd
34	26.1	p592	7, 8, 9(exact answer only), 10a, 13abcde, 14ab, 15bc, 17(find all 19 exact lengths), 18b, 20ab, 22
35	26.2	p599	4bc, 9, 10ac, 11, 12, 13ab, 16ab, 18a, 20, 23bde, 27b

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