Math 13900 **Assignment Sheet** **Spring 2017**

Text: Reconceptualizing Mathematics, 2nd Edition by Sowder, Sowder, & Nickerson. W.H. Freeman, 2014.
Follow instructions written here in addition to instructions in the text. Ma 13900 web page: www.math.purdue.edu/MA13900.

Lesson	Section	Page	Problems
1	16.1	p. 378	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 & 16.2	p. 380 & 384	p. 380: 11abcdek, 13, 14abcdef, 15, 16c (Extend the table.), 18bdfh p. 384: 1(Redraw Venn diagram correctly.), 2bdfhjln, 3bd, 4bdf
3	16.3	p. 389	2(Copy and complete chart.), 3bde, 4b(Draw large (5 cm or more per side length) scalene triangle on unlined paper, and 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	p. 399	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 p. 401 Activity 3 – follow the instructions and bring the kit with you for L5 along with the worksheet for L5.
5	17.2	p. 403	*Lesson 5: Bring your kit of shapes.* 1, 2b, 3, 4, 5bc, 6ab, 7a, 9, 10, 13, 14
6	17.3	p. 410	3, 4abc, 5cd, 7, 10ac, 13(Use graph paper to draw all possible pentominoes. Determine the perimeter of each, and answer all questions.), 14a, 16a, 19bc
7	17.4	p. 415	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, each side length 5 cm or greater. Draw the second figure upside down.)
8	17.5	p. 418	1bdfhjl, 4ac, 6, 7b(Count F, V, E for first figure.), 9ab, 10(Draw a total of 4.)
9	18.1	p. 426	1, 4bdf, 5bde, 6, 7bd, 8bde, 11, 12 *Bring kit for lesson 10.*
10	18.2	p. 431	2bd, 3bd, 4(Label one vertex 'A'; its opposite vertex 'B'; and the remaining vertices 'C,D,E,F.' Use those to list the vertices or edges or faces that the plane or axis will go through.), 5c, 6(Make two separate drawings for each.), 7, 8, 9
11	19.1	p. 439	2c*(Show two distinct tessellations.), 3a(Start with a 3cm square, use both methods – p. 438 – on the same square, and make 8 copies of your figure to show that it tessellates.), 4*, 6a, 7*(Use the "w" pentomino.) *Use graph paper. *Bring kit for lesson 12.*
Exam I: Tuesday, February 7, 2017 @ 8:00pm in SMTH 108.			

12	19.2 & 20.1	p. 442 & 450	p. 442: 2, 3abc p. 450: 5a*, 6a*(scalene) (*Use vertex for center point.), 22
13	20.1	p. 450	1b, 2, 3, 8ab, 9bd, 10a(Show an example.), 15bd, 17def, 19bdfh
14	20.2	p. 458	1, 3bd, 4ad(Also ratio of areas.), 5abcd, 6, 7 *Print off and bring worksheet for Lesson 15*
15	20.3	p. 463	4*, 5* (*List dimensions in increasing order), 6, 8, 9, 11, 12, 16, 18ac, 22, 23 *Bring a compass starting at lesson 16 until the end of the semester.*
16	21.1	p. 474	1, 2(Use 4cm radius.), 3a, 4ab(Draw figure for b – show lines of symmetry and points of rotational symmetry.), 5cdg(use 4cm radius for each), 6(f is 180°), 8XY
17	21.1	p. 476	Unlined paper: 9(Each side should be 5 cm or greater.), 10ac, 11a, 12d, 13bd, 15b, 16cd, 19, 20c, 21bd *Print off and bring worksheet for Lesson 18. Bring cone and cylinder from kit; scissors and tape.*
18	21.2	p. 482	1, 2, 3bc, 4ab, 6bd, 7, 8, 9
19	22.1	p. 492	1, 2, 3, 4, 7 (Make 7 distinct shapes – put matching sides of triangles together.)
20	22.2	p. 496	(Two kinds of dot paper are needed.) 2bce, 4, 5abce, 6abce, 7, 8, 10 *Print off and bring worksheet for Lesson 21.*
Exam II: Tuesday, March 7, 2017 @ 8:00pm in SMTH 108.			
21	22.3	p. 502	Unlined paper and dot paper needed: 2, 3ad, 4, 5, 6 *Print off and bring 3 worksheets for Lesson 22.*
22	22.4	p. 507	1, 2(Use a non-symmetrical figure.)bd f(if a>b) h, 4bdf, 5(Use unlined paper.), 6b, 7(Just name the rigid motion.), 8, 9a, 13bdf, 16(Do the first part only.) *Print off and bring worksheet for Lesson 23.*
23	22.5	p. 512	1, 2b, 3, 4, 5ac, 6, 8, 10, 11b, 12(Do not use right angles.) *Bring centimeter grid paper and tape. Look for the grid paper on the 13900 web page.*
24	22.6 & 23.1	p. 515 & 521	p. 515: 1(Google "cross section of a pear" and make 2 drawings/each.), 2, 4(Label the pictures 1, 2, 3 for reference.), 5(Create a core square without rotational symmetry and then create your pattern by rotating it.), 7 p. 521: 1bdfhj, 2bdfhj, 4bcfhjln, 5bdf, 6b, 8bcd, 9efgh, 10
25	23.1	p. 521	12(no exp), 13, 14acd, 15, 16bdfh, 17bd, 18bd, 19, 22bdf, 23, 25
26	23.2	p. 529	1c, 3, 4, 5, 6bdhi, 7a(name 10) c(name 6), 9, 12, 14, 16bdfh, 17, 18ac, 20
27	23.2	p. 532	22b, 24, 25bdf, 26defg, 27bcd, 31, 34a, 35, 39bdf, 40bdf, 41b, 42a, 43
28	24.1	p. 549	5bdfh, 6ab, 7b, 9bd, 11bd, 12bdfhj, 13b, 14b, 15a, 16, 17, 21a, 26, 28d

29	24.2	p. 556	1bdfjl, 2bd, 3bdf, 4ac, 6, 7bd, 8bc, 9b, 10bd, 12, 14b, 17, 19bdfhjl, 21bd
30	24.3 & 25.1	p. 564 & 571	p. 564: 1, 2 p. 571: 2bd, 3, 4b, 5, 6, 8b, 9bce, 14, 16ab, 17, 18bdfh *Lesson 31 will be located in a computer lab in SC 246.* *Print off and bring worksheet for Lesson 31.*
Exam I: Tuesday, April 11, 2017 @ 8:00pm in SMTH 108.			
31	25.1	p. 573	*Lesson 31 will be located in a computer lab in SC 246.* 18ijkl, 19b, 21acfg, 23ab, 24b, 25bd, 26, 29, 35, 37(let r = 10, 13) *Bring shape I from kit for Lesson 32*
32	25.2	p. 581	2, 3a, 4, 5, 7, 8, 12
33	25.2 & 26.1	p. 582 & 591	p. 582: 13, 16, 18bd, 20, 21, 22bd p. 591: 1bc, 2, 3bdf(Give exact answer only.), 4bd, 6bd
34	26.1	p. 592	7, 8, 9(Give exact answer only.), 10a, 13abcde, 14ab, 15bc, 17(Find all 19 exact lengths.), 18b, 20ab, 22
35	26.2	p. 599	4bc, 9, 10ac, 11, 12, 13ab, 16ab, 18a, 20, 23bde, 27b

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