

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 each 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.

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 29, 2011. Enjoy the day!!*

4	16.4	p389	1, 3, 4, 6, 9(do not use rectangle or square; draw the second figure upside down) <i>L5: Bring your kit of shapes.</i>
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 p409	12abcdek, 13, 14abcden, 15, 16c(make a table similar to ex9), 18bdfh 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 <i>L10: Bring kit.</i>
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, Sept 19<sup>th</sup> at 8:00 PM in SMTH 108; no class on Wednesday, Sept 21<sup>st</sup>**

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 <i>L12: Bring kit.</i>
12	19.2/20.1	p445	2, 3abc; p454 1b, 2, 3, 8ab
13	20.1	p454	5*, 6*(use a vertex for center point) 9bd, 10a(show example), 15bd, 17def, 19bdfh, 22, 24(use 1000 as starting year)
14	20.2	p462	1, 3bd, 4ad(also ratio of areas), 5abcd, 6, 7 <i>L15: Print off and bring worksheet for L15.</i>
15	20.3	p467	4*, 5*(list dimensions in increasing order), 6, 8, 9, 11, 12, 16, 18ac, 22, 23 <i>L16: Bring a compass from now on.</i>

- 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  $180^\circ$ ), 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, Oct 18<sup>th</sup> at 8:00 PM in SMTH 108; no class on Wednesday, Oct 19<sup>th</sup>**

- 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(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(name 6), 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 1bdfhjl, 2bd, 3bdf, 4ac, 6, 7bd, 8bc, 9b, 10bd, 12, 14b, 17, 19bdfhjl, 21bd

**Exam 3 Tuesday, Nov 15<sup>th</sup> at 8:00 PM in SMTH 108; no class on Wednesday, Nov 16<sup>th</sup>**

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

*L31 Print off and bring worksheet for L31. \*\*CLASS WILL MEET IN ENAD 138.*

- \*\*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