Math 13700 Assignment Sheet 2013

Text: Reconceptualizing Mathematics Part 1, Custom First Edition by Sowder, Sowder, & Nickerson. W.H. Freeman, 2011
Follow instructions written here in addition to instructions in the text. Math 13700 web page: www.math.purdue.edu/MA13700

Lesson	Section	Page	Problems
1	1.1/ 1.2	p 8	2b (you can purchase a fraction of a meter of wire mesh), 3, 5, 8
2	1.3	p 14	1(name a metric and an English unit), 2 (for your car), 3 (find info for IN and one other state), 5
3	1.4	p 19	5, 6, 7, 8, 9 Also, make up your own problem that is similar to these and show your diagram and solution.
4	2.1/ 2.2	p 23	4d: MCLVII, e: MDL, f: CCXXV, 5d: three hundred sixty-five, e: one thousand two hundred eight, f: five hundred twenty-three 6d: XCIV, e:MMXLII, f: CMIX
		p 25	1bfjkl, 5, 8
			No class will be held on Wednesday, January 16, 2013
5	2.3	p 31	2c, 3k: 25_{ten} in base four, l: b^2+3b in base b, m: 4^2 in base four, n: 143_{ten} in base five), 4 (use base five), 5c, 6def, 7, 8, 9def, 15de, 16fgh, 17e, 18ef
6	2.4	p 38	1: 210_{three} and 122_{three}, 2e: $103_{four}+231_{four}$, f: $341_{five}-234_{five}$, 4cd, 5e: $523_{six}-144_{six}$, f: $817_{nine}-208_{nine}$, 7c, 8d, 9 (use base seven)
			Draw pictures of pieces for all but problems 4 and 5.
			Read pp 39-40, section 2.5. Rename 6400 in four distinct ways.
7	3.1	p 46	1, 2, 3,7, 8
8	3.2	p 51	2a (Draw a diagram to represent this problem. Answer the question written in the text.),2b, 3, (Write out the incorrect work a student might do for each example and also the correct work needed.), 4b, 5bc, 6, 7, 11abde
9	3.3	p 57	2 Case A, B, C: you do 26 + 57, Case E: you do $86-9$ using both methods, Case G: you do $700-359$, 5 (show both methods for each problem)
10	3.4	p 64	2, 4, 6bcf, 8, 12 (NO, they are not the same.), 14
			Exam 1 Monday, February 4, 2013 at 8:00 pm in MTHW 210
			No class will be held on Wednesday, February 6, 2013.
11	3.5	p 69	2, 3, 4, 5acd, 7 (Write two different types of division problems. Solve.), 8(indicate which division concept is used, make a diagram and solve)
12	3.6/ 3.7	p 73	2, 3, 4 (Use $2973\div14$), 5 (Use $56\div8$)
		p 76	2, 4cd, 6ef, 7b
13	4.1	p 83	1bc, 1e: $612\div3$, 2c: $322_{\text{four}}+13_{\text{four}}$, d: $200_{\text{five}}-43_{\text{five}}$, 5 if $1800\div12=150$, then i: $1800\div6=$__, j: $1800\div24=$__, k: $900\div12=$__, l: $3600\div12=$__ Read pp 85-86. Use 2 sentences to answer p86 #5.
14	5.1	p 89	1ac, 2bcef, 3bcef, 4bd, 5, 6 – make a photocopy of the top of p90
15	5.2	p 93	4, 5 (choose one method that you could use to mentally estimate 27×43), 6acde, 7bcd, 8bcdefg
16	5.3	p 96	1, 2(assume a constant speed of 50mph), 3, 4(determine the cost per person to pay for AIDS research – round to the nearest penny.), 5(NO minimum number of words – any number will do)

17 5.4 p 98 1 (express your answers in scientific notation) d: $\left(12.32\times10^{5}\right)\times\left(4\times10^{3}\right)$,
e: $\left(12.32\times10^{5}\right)\div\left(4\times10^{3}\right)$, f: $\left(12.32\times10^{3}\right)\div\left(4\times10^{5}\right)$, 3 (write the problem and the answer in sci notation)
e: $3,900,000\times260,000,000,000$ f: $1,200,000,000\div24,000,000$ g: $0.000000042\div600,000$
h: $0.0000063\div0.00005$ 4, 11: Change 13 ft/sec into yds/hr. Use sci notation for your answer.
12: Describe (in words) the steps needed to change 564.1×10^{-4} to sci notation. Explain how you know what steps to use. Read pp 99-100, section 5.5.

18 6.1 p 104 2abc (use rectangular regions), 4, 8, 9abde, 10b (use a circle and a rectangle) 12, 13, 14, 15b, 18, 22cd

19 6.2 p 110 1ab, 2*c, 3*ab (*use rectangles), 5bc, 6abe (tell how you know), 7bc, 8a, 9, 10, 11cde, 12a, 13 (explain what happens across the middle as you fill in squares or circles)

20 6.3 p 116 1d (show how you know), 2bf, 4bd, 6, 8 (make a neat list), 9, 10, 12

Exam 2 Monday, March 4, 2013 at 8:00 pm in MTHW 210

No class will be held on Wednesday, March 6, 2013.

21 6.4 p 120 1, 2, 6, 8bcd, 9, 10hijklmnop, 12cdefghi, 14, 15, 16, 18
Read pp122-123, section 6.5. Summarize the four critical ideas.

22 7.1 p 127 2, 4bcd, 8, 10, 13, 15bdg, 16c

23 7.2 p 132 1, 4, 5efgh, 9, 10, 11ad (use p.b. pieces), 16, 17, 18a

24 7.3 p 140 2, 5, 8df(use p.b.pieces), 9, 11, 14ef, 16(use fractions in part c), 18

25 8.1/ 8.2 p 148 1,3 p 151 1, 3, 6, 7ae, 9a
Read pp 153-155, section 8.3. What is NCTM? Name two publications.

26 9.1/ 9.2 p 158 1, 5 (make LARGE drawings of scalene obtuse triangles and measure each side with cm and use a protractor to measure each angle)
p 165 2, 5, 7, 18, 21 (ignore a-d and answer the question with unit ratio and proportion)

27 9.3 p 171 1, 4, 5, 6, 8, 9, 12, 13, 17, 21fghij Read pp 176-177, section 9.4.
Print off worksheet for L28 and bring with to class.

28 10.1 p 182 1b, 2, 3def, 4b, 6cd, 8cd, 9, 10, 11, 14c: $-\frac{1}{2}$ and $-\frac{7}{8}$

29 10.2 p 190 1efgh, 2cdefgh, 3, 4defgh, 5defg, 6defgh, 9, 10, 12bc, 13b

30 10.3 p 196 1, 4abcdefghijk, 5, 7bcdefgh, 8cd, 9, 10, 11b (write a word sentence to ans quest)

Exam 3 Tuesday, April 9, 2013 at 8:00 pm in MTHW 210

No class will be held on Wednesday, April 10, 2013.

31 10.4 p 200 1, 2, 3, 4a (follow instructions for part c), 6 (use 7 numbers: create an add table and a mult table and also list all 11 prop with ex) Read pp 200-201, section 10.5.

32 11.1 p 206 2bc, 3b, 8, 10, 11cfij, 12, 14, 16bc, 17, 18, 19, 20, 21(show arithmetic for each number until you find the next perfect number.)

33 11.2 p 211 1, 3f, 4bc, 7bdf, 8de, 9, 10dg, 11cd, 12cd, 13, 14bcd

34 11.3 p 218 1bd, 2bc, 4, 6de, 10, 11, 13ce, 14ce, 16, 20, 21c: 84×47, 24b

35 11.4 p 225 4, 7bc, 8cd, 11, 13, 17, 19, 23cde, 27fghi, 28df, 30 (draw one result)
11.5 p 229 1, 2, 3