Math 13700 Assignment Sheet Fall 2011

Text: Reconceptualizing Mathematics Part 1, Custom Frist Edition by Sowder, Sowder, & Nickerson. W.H. Freeman, 2011

Follow instructions written here in addition to instructions in the text. Purdue web page: www.math.purdue.edu/MA13700

Lesson	Section	Page	Problems
1	1.1/ 1.2	p 8	2b, 3, 5, 8
2	1.3	p 14	1(name a metric and a standard unit), 2 (for your car), 3 (find info for IN and one other state), 4
3	1.4	p 19	5, 6, 7, 8 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
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)
			Read pp 39-40, section 2.5. Rename 6400 in four distinct ways.
7	3.1	p 46	1a (Write a word problem. Change the wording to express the question in three different ways. Use a sketch to solve.), 2(Coach's time:70 sec), 3, 7 (Add information about Carmen so you can determine each person's weight. Solve.), 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 63	2, 4, 6bcf, 8, 12, 14
			Exam 1 Monday, Sept 19th at 6:30 pm in LILY 1105; no class on Wednesday, Sept 21st
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	1bce: $612\div3$, 2c: 322 + 13 in base four, d: $200-43$ in base 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 – draw grids on your paper or copy p90
15	5.2	p 93	4, 5 (Choose one method that you could use to mentally compute 27×43.), 6acde, 7bcd, 8bcdefg

16 5.3 p 96 1, 2, 3, 4(for million, round your answer to the nearest 0.001; for billion, to 0.01; for trillion, to the nearest whole number), 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 Wednesday, Oct 19th at 6:30 pm in LILY 1105; no class on Friday, Oct 21st

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, 16, 17, 18a

24 7.3 p 140 2, 5, 8df, 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 triangles.)
p 165 2, 5, 7, 18, 20

27 9.3 p 171 1, 4, 5, 6, 8bcd, 9bcd, 12, 13, 17, 21fghij Read pp 176-177, section 9.4.

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

Exam 3 Monday, Nov 14th at 6:30 pm in LILY 1105; no class on Wednesday, Nov 16th

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

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(change 385 to 495), 19, 23cde, 27fghi, 28df, 30 (draw one result)

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