

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, 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) 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 63	2, 4, 6bcf, 8, 12, 14
Exam 1 Monday, September 17, 2012 at 6:30 pm in PHYS 114			
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 p 76	2, 3, 4 (Use $2973 \div 14$), 5 (Use $56 \div 8$) 2, 4cd, 6ef, 7b
13	4.1	p 83	1bce: $612 \div 3$, 2c: $322 + 13$ in base four, d: $200 - 43$ in base five, 5 if $1800 \div 12 = 150$, then i: $1800 \div 6 = __$, j: $1800 \div 24 = __$, k: $900 \div 12 = __$, l: $3600 \div 12 = __$ 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 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: $(12.32 \times 10^5) \times (4 \times 10^3)$,
 e: $(12.32 \times 10^5) \div (4 \times 10^3)$, f: $(12.32 \times 10^3) \div (4 \times 10^5)$, 3 (write the problem and the answer in sci notation)
 e: $3,900,000 \times 260,000,000,000$ f: $1,200,000,000 \div 24,000,000$ g: $0.000000042 \div 600,000$
 h: $0.0000063 \div 0.00005$ 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)

Exam 2 Monday, October 15, 2012 at 6:30 pm in PHYS 114

- 20 6.3 p 116 1d (show how you know), 2bf, 4bd, 6, 8 (make a neat list), 9, 10, 12
- 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 triangles and measure each side with cm)
 p 165 2, 5, 7, 18, 20acd
- 27 9.3 p 171 1, 4, 5, 6, 8, 9, 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
- 30 10.3 p 196 1, 4abcdefghijk, 5, 7bcdefgh, 8cd, 9, 10, 11b (write a word sentence to ans quest)

Exam 3 Wednesday, November 14, 2012 at 6:30 in PHYS 114

- 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