Dimensions Mathematics Core Edition 7A
Teaching Notes and Solutions

(Updated 5/19/2017)

Page				Updated here mm/dd/yyyy
27	Ex. 1.5	14(a)	$600 = 2^3 \times 3 \times 5^2$ A perfect square has an even number of each prime factor. Thus another 2 and 3 is needed, or 2 x 3. $(2^3 \times 3 \times 5^2) \times 2 \times 3 = (2^2 \times 3 \times 5)^2 = 600 \times 6$. ($2^3 \times 3 \times 5^2$ does not equal $2^3 \times 3 \times 5^2) \times 2 \times 3$ as shown in the current solution. Remove the equal sign in the second line of the solution.)	12/04/2013
27	Ex. 1.5	14(b)	Again, remove the equal sign in the second line of the solution. A perfect square has a multiple of 3 for each prime factor. Thus another 5 and two more 3's are needed, or 3 x 3 x 5. $(2^3 \times 3 \times 5^2) \times 3 \times 3 \times 5 = (2 \times 3 \times 5)^3 = 600 \times 45$.	12/04/2013
33	CA 4	3.	Second table, column 1, row 4: $-1 - (-4) = 3$	02/22/2013
45	Ex. 2.3	6.(d)	$-\lvert -7 \rvert - (-3) = -7 + 3$ $= -4$	04/01/2013
50	Ex. 2.5	5.(a)	In both the question and the solution: $\left(-\frac{2}{3}\right)^3 \times \frac{9}{16} \div (-4)$	04/01/2013
51	Ex. 2.5	8.(a)	Suggested answers: $\frac{17}{28}, \frac{9}{14}$	03/14/2013
64	Ex. 3.1	6.(b)	Final line of solution $= \left(\frac{t}{8} + \frac{1}{3}\right)$ hours	03/13/2013
73	Ex. 3.3	17.(b)	Delete the second line of the solution. The answer should not be simplified; algebraic manipulations are in the next chapter.	03/21/2013
		17.(c)	When x = 75, Sum of the three students' scores $= x + \left(\frac{3}{5}x + 18\right) + \left[2\left(\frac{3}{5}x + 18\right) - 45\right]$ $= 75 + \left(\frac{3}{5} \times 75 + 18\right) + \left[2\left(\frac{3}{5} \times 75 + 18\right) - 45\right]$ = 219	03/21/2013

74	Ex. 3.3	19.(a)(iii)	Total score in the game $= x + 2(3x + 5) + 3\left(\frac{4}{5}x\right)$ Answer does not need to be simplified further, since algebraic manipulations are in the next chapter.	03/21/2013
		19.(b)	When x = 10, Total score in the game $= 10 + 2(3 \times 10 + 5) + 3 \times \frac{4}{5} \times 10$ $= 10 + 70 + 24$ $= 104$	03/21/2013
89	Ex 4.3	5	Express each of the following as a single fraction in simplest form.	04/23/2013
89	Ex 4.3	5.(b)	$-\frac{3t}{7}+\frac{t+8}{2}$ Under solutions: $-\frac{3t}{7}+\frac{t+8}{2}=\frac{-2(3t)+7(t+8)}{14}$ $=\frac{-6t+7t+56}{14}$ $=\frac{t+56}{14}$	04/23/2013
89	Ex. 4.3	5(b)	Under solutions, last step should be $=\frac{5t-16}{15}$	04/23/2013
89	Ex 4.3	5.(h)	The solution is correct, but does not use the LCM. This can lead to confusion, since simplifying algebraic fractions is not covered, and all the examples in the chapter use LCM and thus do not require simplification at the final step since it involves factorizing, or additional discussion of distributive property. So the steps should be changed to: $-\frac{y}{5}+\frac{3y-1}{2}-\frac{4y+7}{3}$ $=\frac{-6y+15(3y-1)-10(4y+7)}{30}$ $=\frac{-6y+45y-15-40y-70}{30}$ $=\frac{-y-85}{30}$	04/23/2013
114	6.3 Try It	14	Same conversion factor as used in Example should be used, i.e. 1.6 km/mi, and answer should be rounded to a whole number. The measurement has only 2 significant figures. 61 mph x 1.6 km/mi = 97.6 km/h 98 km/h (rounded to a whole number)	05/19/2017

162	Ex. 8.4	2(c)	(i) right angled (m∠R = 90°) (ii) scalene (The side given does not have to be between the 2 given angles.)	11/25/2013
		2(e)	(i) acute angled (ii) isosceles ((m∠R = 65°)	11/25/2013
166	Ex. 8.5	2(b)	FH = 4.9 cm (6.8 cm is length of EG)	12/06/2013
167	Ex. 8.5	4(a)	Problem in this book is different from one in textbook, which states that XY = YZ = 4.5 cm. Change problem to read: Construct a quadrilateral XYZT in which XY = YZ = 4.5 cm, ZT = 2 cm, XT = 4 cm, and YT = 5 cm. Change diagram so that distance for XY is labeled 4.5. Change first direction: 1. Draw a line segment XY 4.5 cm long. (Or change problem in textbook)	12/06/2013
		4(b)	For changes in 4(a) above: $m\angle$YZT = 92° $m\angle$YTZ = 123°	