

Dimensions Mathematics Core Edition 8A Workbook Solutions

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Page	Ch.					Updated (mm/dd/yyyy)
4	1	4	(h)	Solution	$\sqrt{80.5} \times \sqrt[3]{26.95} \div 53.5 \approx \sqrt{81} \times \sqrt[3]{27} \div 54$	
9		43	(c)(ii)	Solution	$8,447 = 8,400$ (correct to 2 sig. fig.)	
16	2	14	(a)	Solution	Substituting (3) in to (2), $\frac{3(36-9y)}{2} + 5y = 37$	
		14	(e)	Solution	Substituting $x = 11$ into (3),	
18		16		Solution	Substituting $y = 9$ into (3), $x + 12(9) = 99$ $x + 108 = 99$	
19		22	(a)	Question	She answered x questions correctly and y questions incorrectly .	
	3	9	(c)	Solution	$= 3(m + 2n)^2$	
27		22	(c)(ii)	Solution	$(x + 100)^2 - (x - 100)^2 = 640$	
		23		Solution	(a) (i) Diameter = $2(3r + 8s)$ cm Radius = $(3r + 8s)$ cm Circumference = $2\pi \times$ radius $= 2\pi(3r + 8s)$ cm (ii) Area = $\pi \times$ radius ² $= \pi(3r + 8s)^2$ cm ² (b) (i) Height = $4(3r + 8s)$ cm Volume of prism = base area \times height $= \pi(3r + 8s)^2 \times 4(3r + 8s)$ $= 4\pi(3r + 8s)^3$ cm ³ (ii) Total surface area of prism = 2 \times base area + circumference \times height $= 2\pi(3r + 8s)^2 + 2\pi(3r + 8s) \times 4(3r + 8s)$ $= 2\pi(3r + 8s)^2 + 8\pi(3r + 8s)^2$ $= 10\pi(3r + 8s)^2$ cm ²	
28		27	(b)	Solution	Since $2x > 3y$, $2x - 3y > 0$,	
		28	(a)(ii)	Solution	$1 + x + x(1 + x) + x(1 + x)^2 + x(1 + x)^3$	
			(b)(ii)	Solution	n must be a positive odd integer .	
29	4	1			The number for the first problem should be 1, not 6.	
29 30		1 2 3			The method for the solution shows the cross method which is in Extend your Learning at the end of the chapter in the textbook.	
30		3	(f)	Solution	In the last line of the cross method: $6p^2$	

34		22	(b)	Solution	Second to last line: $(w - 1)(w - 1)(w + 2)$	
36		26	(a)	Solution	If the bars on the diagram are shifted as shown, the area is unchanged. Area of shaded region = ...	
			(c)	Solution	\therefore width of the vertical bars = 3 cm	
		30		Question	A car begins to drive from Town A to town B via an expressway at 9:00 AM. A van leaves from town B to town A via the same expressway at 9:17 AM.	
38	5	5	(e) – (h)	Solution	Delete (e). The problem is not in the workbook. Renumber the rest as (e) – (f).	
			(e)	Solution	$14x^2 - 368x + 2370 = 0$ $7x^2 - 284x + 1185 = 0$ $(7x - 79)(x - 15) = 0$ $x = \frac{79}{7}$ or $x = 15$ $x = 11\frac{2}{7}$ or $x = 15$	02/25/2015
40		8		Question	Remove commas and period at the end of the equations.	
41		12			Insert period after the problem number (12.)	
43		16	(g)	Solution	Delete (g). The problem is not in the workbook.	
			(h)	Solution	Renumber (h) as (g). Second to last line: $= \frac{366 \pm \sqrt{145,924}}{34}$	
48		29	(a)	Solution	Area of $\triangle ABC$ = Area of $ADEF$ – Area of ...	
53	6	5	(a)	Solution	Reverse labels for points A and B in copy of the figure. Reverse labels for points A'' and B'' in image for (ii)	
57		12		Solution	Both parts are labeled (a). Change second (a) to (b).	
58		15	(a)(i)	Solution	By observation, (i) the equation of l_1 is $x = -1$, (ii) the equation of l_2 is $y = 3$.	
		18		Question	The points ... are rotated about the origin to the points ...	
60		22	(a)	Solution	$\therefore x = 2 \times 4$ $= 8 \text{ cm}$... $\therefore y = 5 \text{ cm}$	
		23		Question	Complete the angle mark for angle NMX in the diagram.	
			(a)		Change last comma to a period.	
			(b)(ii)	Solution	$\frac{QX}{NX} = \frac{PX}{MX}$	

61		25	(b)(ii)	Question	Hence, find the perimeter of the enlarged quadrilateral in meters .	
		27		Question	The coordinates of P and Q are (0, 2) and (0, 4) respectively. (a) Find, by construction on a sheet of graph paper , ...	
62		29	(f)	Question	Describe a single transformation that will map $\Delta A_1B_1C_1$ directly to $\Delta A_3B_3C_3$.	
				Solutions	The figure (d)(i) is incorrect. The points should be at $A_3(1, -10)$, $B_3(2, -10)$, $C_3(0, -7)$.	
			(c)(ii)	Solution	$A_2(-5, 2)$, $B_2(-8, 2)$, $C_2(-6, -1)$	
63		32	(a)	Solution	Third line from the bottom: $= \frac{1}{4} \times \frac{2}{5}$	
64		35	(a)	Solution	$ABCD$ is translated to $PQRS$ by -15 in the y-direction .	
65		36	(c)	Solution	Delete part (c). The question does not include a part (c).	
68	7	6		Question	Find the unknown angles x and y .	
69		9	(c)	Solution	Formatting issue: equal sign should be aligned.	
		14	(a)	Solution	Delete the \therefore symbol.	
70			(b)-(f)	Solution	Delete the \therefore symbols.	
71		18	(e) (f)	Question Solution	These parts are not in the workbook and so should be deleted.	
73		22		Question	The diagram shows a rectangular box ABDC resting...	
75		27	(b)	Question	If the sum of the interior angles of a regular ...	
76		29		Question	In the figure, O is the center of the circle...	
			(c)	Solution	Fifth line: $= 180^\circ - \frac{1}{2}(m\angle AOB + m\angle AOE)$	