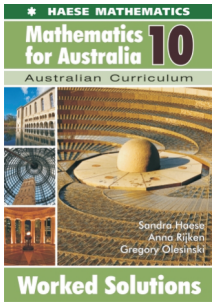

ERRATA

Mathematics for Australia 10

Worked Solutions

First edition - 2013 initial print

The following errata were made on 27/Jul/2015

page 64 **CHAPTER 4 EXERCISE 4B.2,** Question **2 h** should read:

2 **g** $\dfrac{3b+9}{6}$

$= \dfrac{3(b+3)}{6}$ ← HCF is 3

$= \dfrac{{}^{1}\cancel{3}(b+3)}{{}_{2}\cancel{6}}$

$= \dfrac{b+3}{2}$

h $\dfrac{8b-12}{6}$

$= \dfrac{4(2b-3)}{6}$ ← HCF is 4

$= \dfrac{{}^{2}\cancel{4}(2b-3)}{{}_{3}\cancel{6}}$

$= \dfrac{2(2b-3)}{3}$

$= \dfrac{4b-6}{3}$

page 81 **CHAPTER 4 PRACTICE TEST 4C,** Question **3 c ii** should not cancel 0/0:

3 **c** Using **b**, $\left(a-\frac{9}{a}\right) \div \left(1-\frac{a}{3}\right) = \frac{3(a+3)}{-a}$

i When $a=1$,

$\dfrac{3(a+3)}{-a} = \dfrac{3(1+3)}{-1}$

$= \dfrac{3\times 4}{-1}$

$= \dfrac{12}{-1}$

$= -12$

ii When $a=3$,

$1-\frac{a}{3} = 1-\frac{3}{3}$

$= 1-1$

$= 0$

$\therefore \left(a-\frac{9}{a}\right) \div \left(1-\frac{a}{3}\right)$

$= \left(a-\frac{9}{a}\right) \div 0$

which is undefined

iii When $a=5$,

$\dfrac{3(a+3)}{-a} = \dfrac{3(5+3)}{-5}$

$= \dfrac{3\times 8}{-5}$

$= \dfrac{24}{-5}$

$= -\frac{24}{5}$

page 180 **CHAPTER 8 EXERCISE 8D,** Question **7 b i** should read:

7 **b** **i** $A=180,\ a=8,\ b=6$

$\therefore\ c = \dfrac{180-2\times 8\times 6}{2(8+6)}$

$= \dfrac{84}{2\times 14}$

$= 3$

ii $A=102,\ a=b=3$

$\therefore\ c = \dfrac{102-2\times 3\times 3}{2(3+3)}$

$= \dfrac{84}{12}$

$= 7$

iii $A=531,\ a=9,\ b=12$

$\therefore\ c = \dfrac{531-2\times 9\times 12}{2(9+12)}$

$= \dfrac{315}{42}$

$= 7.5$

The following errata were made on or before 12/Jun/2015

page 19 **CHAPTER 1 PRACTICE TEST 1C,** Question **1 a ii** should read:

1 **a** **i** 1 hour = 60 minutes

$= 60 \times 60$ seconds

{1 minute = 60 s}

$= 3600$ seconds

and $2.998\times 10^8 \times 3600$

$= 1.079\,28 \times 10^{12}$

$\approx 1.079\times 10^{12}$

So, light travels about 1.079×10^{12} m in one hour (in a vacuum).

ii 1 day = 24 hours

$= 24 \times 3600$ seconds {using **a i**}

$= 86\,400$ seconds

and $2.998 \times 10^8 \times 86\,400$

$= 2.590\,272 \times 10^{13}$

$\approx 2.590\times 10^{13}$

So, light travels about 2.590×10^{13} m in one day (in a vacuum).

page 170 **CHAPTER 8 Exercise 8B,** Question **1 b** should read:

1 **a** $C = 2\pi r$ where $r = 4.2$

$\therefore\ C = 2 \times \pi \times 4.2$

≈ 26.4

$\therefore$ the circumference is approximately 26.4 cm.

b $C = 2\pi r$ where $C = 112$

$\therefore\ 112 = 2\pi r$

$\therefore\ r = \dfrac{112}{2\pi}$

≈ 17.8

$\therefore$ the radius is approximately 17.8 cm.

page 224 **CHAPTER 10 EXERCISE 10E,** Question **2 h** should read:

2 **g** $x^2 + 1 = 3x$

$\therefore\ x^2 - 3x + 1 = 0$ which has $a = 1,\ b = -3,\ c = 1$

$\therefore\ x = \dfrac{-(-3) \pm \sqrt{(-3)^2 - 4(1)(1)}}{2(1)}$

$\therefore\ x = \dfrac{3 \pm \sqrt{9-4}}{2}$

$\therefore\ x = \dfrac{3 \pm \sqrt{5}}{2}$

h $2x^2 = 2x - 3$

$\therefore\ 2x^2 - 2x + 3 = 0$ which has $a = 2,\ b = -2,\ c = 3$

$\therefore\ x = \dfrac{-(-2) \pm \sqrt{(-2)^2 - 4(2)(3)}}{2(2)}$

$\therefore\ x = \dfrac{2 \pm \sqrt{4-24}}{4}$

$\therefore\ x = \dfrac{2 \pm \sqrt{-20}}{4}$

but $-20 < 0$ $\therefore$ no real solutions exist.

page 306 **CHAPTER 13 EXERCISE 13D,** Question **4 a** should read:

4 **a**

Distance d (m)	*Frequency*	*Interval midpoint*	*Product*
$20 \leqslant d < 30$	2	25	50
$30 \leqslant d < 40$	6	35	210
$40 \leqslant d < 50$	26	45	1170
$50 \leqslant d < 60$	12	55	660
$60 \leqslant d < 70$	3	65	195
$70 \leqslant d < 80$	1	75	75
Total	50		2360

$\therefore$ mean

$= \dfrac{\text{sum of data values}}{\text{the number of data values}}$

$\approx \dfrac{2360}{50}$

≈ 47.2 m

page 394 **CHAPTER 17 EXERCISE 17D.1,** Question **4 a** should read:

4 **a** The graph of $y = g(x)$ is obtained by translating $f(x) = -\frac{1}{2}x - 1$ 4 units upwards.

$\therefore\ g(x) = f(x) + 4$

$= -\frac{1}{2}x - 1 + 4$

$= -\frac{1}{2}x + 3$

b The graph of $y = g(x)$ is obtained by translating $f(x) = \frac{3}{2}x + 1$ 2 units to the right.

$\therefore\ g(x) = \frac{3}{2}(x - 2) + 1$

$= \frac{3}{2}x - 3 + 1$

$= \frac{3}{2}x - 2$

page 447 **CHAPTER 20 EXERCISE 20A,** Question **9 c** should read:

9 **b** radius of circle A ≈ 5.39 units

radius of circle B ≈ 5.83 units

c Distance between $(-2, 3)$ and $(6, -3)$

$= \sqrt{(6 - (-2))^2 + (-3 - 3)^2}$

$= \sqrt{8^2 + (-6)^2}$

$= \sqrt{100}$

$= 10$ units