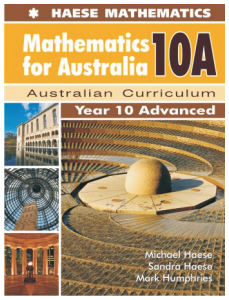


ERRATA

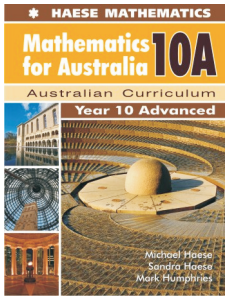
Mathematics for Australia 10A

2015 First Edition, first reprint

The following erratum was made on or before 22/Jun/2016

page 615 **INDEX,** second page of index in the 2015 reprint was wrong, replace with the next page:

See next page



ERRATA

Mathematics for Australia 10A

2013 First Edition, initial print

The following errata were made on or before 16/Jul/2015

page 250 **CHAPTER 12 Section B Historical note,** First and Second paragraphs should have correct spelling for:

Aryabhata

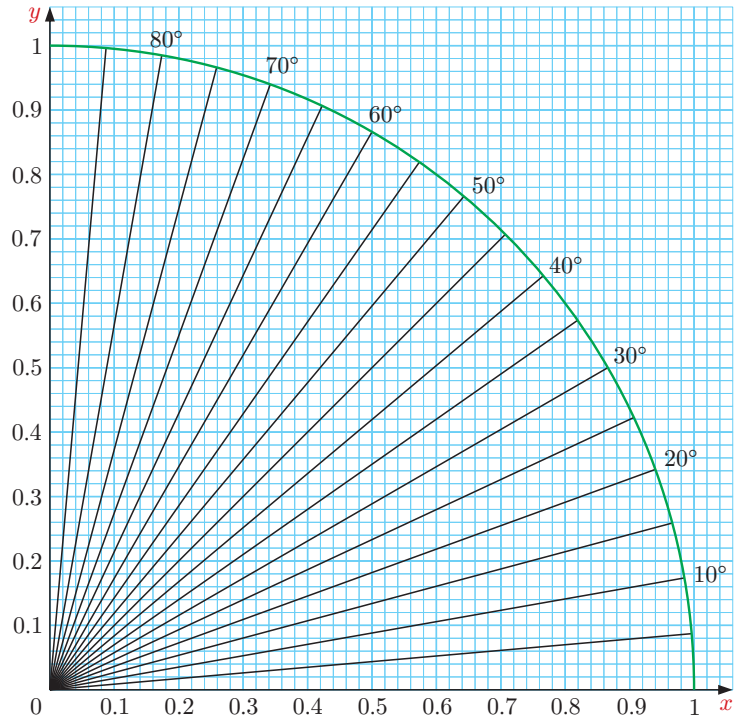
page 258 **CHAPTER 12 Section F TRUE BEARINGS,** Third paragraph should read:

So, the bearing of B from A is the clockwise measure of the angle between the 'north' line through A, and [AB].

page 307 **CHAPTER 14 Section A BUSINESS CALCULATIONS,** Text below **DISCOUNT** should read:

To encourage a sale, a retailer may offer a **discount**. This means that the **marked price** is **reduced** or **discounted** by a certain amount or percentage.

page 323 **CHAPTER 15 Section A,** Quarter unit circle diagram should include axis labels:



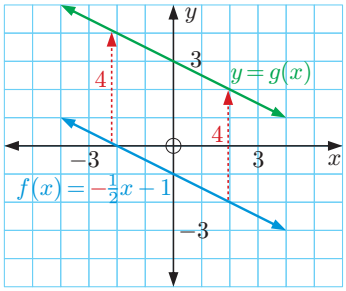
page 350 **CHAPTER 16 Example 6,** bottom line should read:

Check: In (1): $29 + 16 = 45$ ✓ In (2): $29 - 16 = 13$ ✓

page 396 **CHAPTER 18 EXERCISE 18D.1,** question **4 a** should have correct label for $f(x)$:

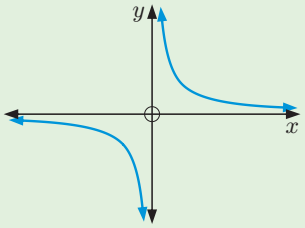
4 Find $g(x)$ in the following graphs:

a

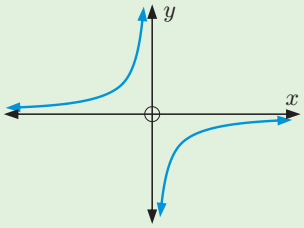


page 519 **CHAPTER 24 Section C,** Green fact box should read:

- For $k > 0$, the graph has shape



- For $k < 0$, the graph has shape



- $x = 0$ is a vertical asymptote.
- $y = 0$ is a horizontal asymptote.

page 555 **ANSWERS PRACTICE TEST 4C,** Question **3 c ii** should not cancel a division by 0:

3 **a** **i** $\frac{a^2-9}{a}$ **ii** $\frac{3-a}{3}$ **b** $-\frac{3(a+3)}{a}$

c **i** -12 **ii** undefined **iii** $-\frac{24}{5}$

page 556 **ANSWERS PRACTICE TEST 5B,** Question **4** should read:

3 **a** $x = 1$ **b** $x = \frac{10}{9}$ **4** The largest integer is 28.

page 558 **ANSWERS EXERCISE 7A,** Question **3 f** should read:

3 **a** ≈ 10.7 m **b** ≈ 441.3 m **c** ≈ 14.3 cm

d ≈ 85.7 cm **e** ≈ 22.8 cm **f** ≈ 40.7 cm

page 558 **ANSWERS EXERCISE 7C.1,** Question **2** should read:

2 $A = 2(ab + bc + ac)$ units^2

page 558 **ANSWERS EXERCISE 7D.1,** Questions **1 f** and **9 b** should note approximation:

1 **a** 72 m^3 **b** 80 cm^3 **c** 525 m^3

d ≈ 226 cm^3 **e** ≈ 177 m^3 **f** ≈ 183 cm^3

9 **a** ≈ 2378 cm^3 **b** ≈ 6 kg **10** 15 915 handles

page 559 **ANSWERS EXERCISE 7D.2,** Question **3 c** should not be an approximation:

3 **a** ≈ 789 cm^3 **b** ≈ 264 m^3 **c** 2016 m^3

page 559 **ANSWERS EXERCISE 7D.3,** Question **6 a** should not be an approximation:

6 **a** 47 400 sinkers **b** ≈ 1.06 cm **c** ≈ 14.1 cm^2

page 559 **ANSWERS PRACTICE TEST 7B,** Question **4 a** should not be an approximation:

4 **a** 14 278 cm^2 **b** ≈ 28.3 m^2 **c** 496 mm^2

page 559 **ANSWERS PRACTICE TEST 7C,** Questions **2 b** and **4 c** should read:

2 **a** **i** $\frac{x}{2}$ m **ii** $\frac{x}{4}$ m **b** Show both areas are $\frac{\pi x^2}{4}$ m^2.

3 **a** ≈ 37.4 cm^2 **b** 15 cm^3 **c** 15 mL **d** 133 ice blocks

4 **a** ≈ 3848 cm^3 **b** ≈ 3.85 mL **c** ≈ 2278 cm^3

page 560 **EXERCISE 8D,** Question **10 c** should include:

10 **b** $b = \frac{6g}{g-1}$ **c** $0g$ $0b$, $2g$ $12b$, $3g$ $9b$, $4g$ $8b$, $7g$ $7b$

page 561 **ANSWERS PRACTICE TEST 8B,** Question **10 b** should read:

10 **b** $S_1 = 2 = 1 \times 2$
$S_2 = 6 = 2 \times 3$
$S_3 = 12 = 3 \times 4$
$S_4 = 20 = 4 \times 5$
$S_5 = 30 = 5 \times 6$ $\therefore$ $S_n = n(n+1)$

page 561 **ANSWERS PRACTICE TEST 8C,** Question **5 c ii** should not be an approximation:

5 **c** **i** $104°$F **ii** $-459.67°$F **iii** $-99.67°$F

page 561 **ANSWERS EXERCISE 9C,** Question **5** should read:

5 Join [AC], [BC], and [CX].
Hint: Show $\triangle$ACX $\cong$ $\triangle$BCX {RHS}

page 561 **ANSWERS EXERCISE 9F,** Question **10 c** should read:

10 **a** 10 cm **b** 30 cm^2 **c** 6 mm, 2.25 mm **d** 1.25 mL

page 562 **ANSWERS PRACTICE TEST 9A,** Question **6** should read:

6 **D** **7** **C** **8** **B** **9** **E** **10** **D**

page 562 **ANSWERS PRACTICE TEST 9C,** Question **1 c i** should have correct units:

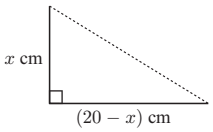
1 **c** **i** **A** 90 cm^3, **B** 720 cm^3 **ii** $8 = 2^3$ ✓

page 563 **ANSWERS EXERCISE 10F,** Questions **3 a** and **3 c** should read:

3 **a** $x = 4$ or 12, but $x > 7$, $\therefore$ $x = 12$
b $x = 5 + \sqrt{70} \approx 13.4$
c $x = \frac{3}{2}$ or 8, but $x > \frac{7}{3}$, $\therefore$ $x = 8$

page 564 **ANSWERS PRACTICE TEST 10C,** Question **3 a** should include solution:

3



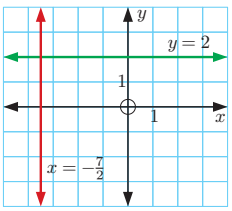
a **i** $(10 + 2\sqrt{10})$ cm, $(10 - 2\sqrt{10})$ cm, and $2\sqrt{70}$ cm
ii $(20 + 2\sqrt{70})$ cm

page 565 **ANSWERS EXERCISE 11D.2,** Question **3 c** should read:

3 **c** gradient of [AC] $= 1$, gradient of [BD] $= -1$
$\therefore$ the diagonal [AC] bisects the diagonal [BD].

page 567 **ANSWERS REVIEW SET 11,** Question **8** should have line $x = -\frac{7}{2}$ in correct location on graph:

8



9 $a = 4$

10 **a** AB $=$ BC $= 5$ units
b X$(\frac{1}{2}, \frac{1}{2})$
c gradient of [BX] $= 7$,
gradient of [AC] $= -\frac{1}{7}$
and $7 \times -\frac{1}{7} = -1$.

page 568 **ANSWERS EXERCISE 12D,** Question **1 f** should not be an approximation:

1 **a** $\theta \approx 48.2°$ **b** $\theta \approx 45.6°$ **c** $\theta \approx 56.3°$
d $\theta \approx 37.4°$ **e** $\theta \approx 42.2°$ **f** $\theta = 45°$

page 569 **ANSWERS EXERCISE 13A,** Question **4 c** should read:

4 **c** approximately symmetrical **d** $\approx 38.3\%$

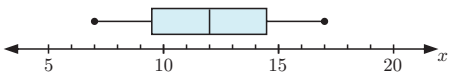
page 571 **ANSWERS EXERCISE 13D,** Questions **1 b ii** and **2 c ii** should read:

1 **a** 50 trout **b** **i** ≈ 5 trout **ii** ≈ 15 trout

2 **c** **i** $\approx 64\%$ **ii** ≈ 52 students **iii** $\approx 74\%$

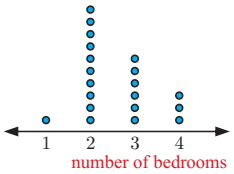
page 571 **ANSWERS EXERCISE 13F.1,** Question **3 b** should have correct boxplot maximum:

3 **b**



page 573 **ANSWERS REVIEW SET 13,** Questions **2 c** and **3 d** should read:

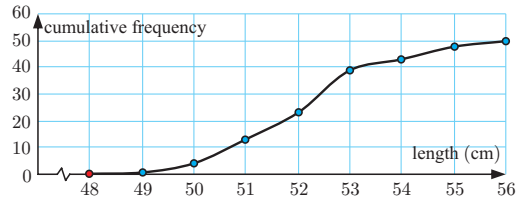
2 **a** discrete **b** no **c** **Number of bedrooms in students' houses**



3 **a** 14 **b** 13.8 **c** 14 **d** 17

page 574 **ANSWERS PRACTICE TEST 13C,** Question **5 e** should include data point at 48cm:

5 **e** **Cumulative frequency graph of newborn babies**



page 576 **ANSWERS PRACTICE TEST 15C,** Question **3 b Hint** should give correct formula for area of a triangle:

3 **b** **Hint:**
Area $\triangle \mathrm{P'Q'R'} = \frac{1}{2}(ka)(kb)\sin \mathrm{Q'} = k^2(\frac{1}{2}ab\sin \mathrm{Q'})$

page 577 **ANSWERS EXERCISE 16B,** Question **1 b** should read:

1 **a** $x = 7, \quad y = 4$ **b** $x = -1, \quad y = -5$

page 578 **ANSWERS PRACTICE TEST 16C,** Questions **2 b ii and 2 b iii** should be swapped:

2 **b** **i** $x = 4, \quad y = 3$ **ii** $x = 0, \quad y = -5$
iii $x = -5.6, \quad y = 0.6$

page 578 **ANSWERS EXERCISE 17A,** Question **6 b v** should read:

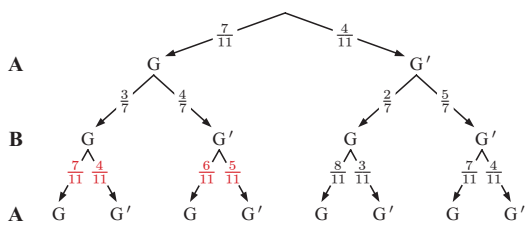
6 **b** **i** $\frac{1}{18}$ **ii** $\frac{1}{6}$ **iii** $\frac{11}{36}$
iv $\frac{5}{9}$ **v** $\frac{1}{4}$ **vi** $\frac{1}{6}$

page 578 **ANSWERS EXERCISE 17A,** Question **11 c i** should read:

11 **b** 150 passengers **c** **i** $\frac{33}{50}$ **ii** $\frac{13}{50}$ **iii** $\frac{2}{25}$

page 579 **ANSWERS EXERCISE 17B.2,** Question **8** should read:

8



page 580 **ANSWERS EXERCISE 17D.2,** Question **6 a** should read:

6 **a** From bag A, as $\mathrm{P}(2 \text{ yellows from A}) = \frac{1}{3}$
whereas $\mathrm{P}(2 \text{ yellows from B}) = \frac{1}{14}$.

page 580 **ANSWERS PRACTICE TEST 17B,** Questions **5 b** and **10** should read:

5 **b** $\frac{9}{20}$

10 A is the event of "spinning at least one blue"
and B is the event of "spinning different colours".
$\text{P}(A) = \frac{1}{2}$, $\text{P}(B) = \frac{17}{24}$, $\text{P}(A \mid B) = \frac{10}{17} \neq \text{P}(A)$
$\therefore$ A and B are not independent.

page 580 **ANSWERS PRACTICE TEST 17C,** Question **4 b** should read:

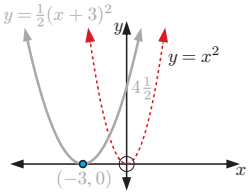
4 **a** $\frac{13}{55}$ **b** Increases as there are more red cards. **c** $\frac{1}{3}$

page 580 **ANSWERS EXERCISE 18A,** Question **1 c** should read:

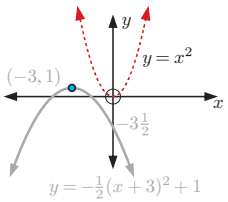
1 **c** Domain is $\{x \mid -3 < x < 4\}$. Range is $\{y \mid -5 < y < 6\}$.

page 585 **ANSWERS EXERCISE 19B.2,** Questions **5 e** and **f** should have better scaled $y = x^2$ function:

5 **e**



f



page 586 **ANSWERS EXERCISE 19C,** Questions **4 d** and **f** should read:

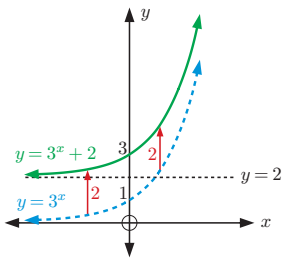
4 **d** $\frac{7 \pm \sqrt{73}}{6}$ **e** no x-intercepts **f** $\frac{9 \pm \sqrt{33}}{8}$

page 589 **ANSWERS PRACTICE TEST 19C,** Question **2 d** should read:

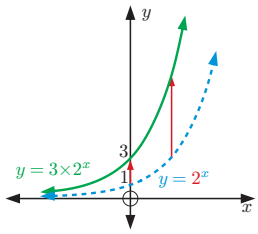
2 **d** $x = \frac{8 \pm \sqrt{-8}}{4}$ $\therefore$ no real solutions

page 590 **ANSWERS EXERCISE 20B.2,** Question **1 b i** should include vertical translation and Question **3 a** should read:

1 **b** **i**



3 **a**



page 592 **ANSWERS REVIEW SET 20,** Question **4 b iii** should not be an approximation:

4 **a** 1000 g **b** **i** $\approx$ 812 g **ii** $\approx$ 354 g **iii** 125 g

page 593 **ANSWERS PRACTICE TEST 20B,** Question **7** should be an approximation:

6 **a** $x = -2$ **b** $x = 4$ **7** ≈ 2.85

page 594 **ANSWERS EXERCISE 21C,** Question **1 b** should read:

1 **b** The perpendicular from the centre of a circle to a chord bisects the chord, and bisects the angle at the centre subtended by the chord.

page 594 **ANSWERS REVIEW SET 21,** Question **3 b** should read:

3 **b** $x = 140$ {angle at the centre,
exterior angle of a triangle}

page 594 **ANSWERS PRACTICE TEST 21C,** Questions **2 a iii** and **iv** should read:

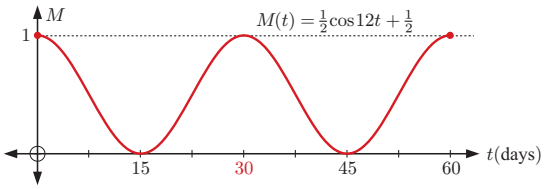
2 **a** **i** $\widehat{\text{PSR}} = 2\alpha$ **ii** $\widehat{\text{PQR}} = 2\alpha$ **iii** $\widehat{\text{PRQ}} = 2\alpha$
iv $\widehat{\text{QPR}} = 2\alpha$

page 596 **ANSWERS EXERCISE 22E,** Question **7 b** should read:

7 **b** $x^2 + 5x + 7 = 0$ and $x^2 - 4x + 5 = 0$ have no real solutions. So, $h(x)$ has no x-intercepts.

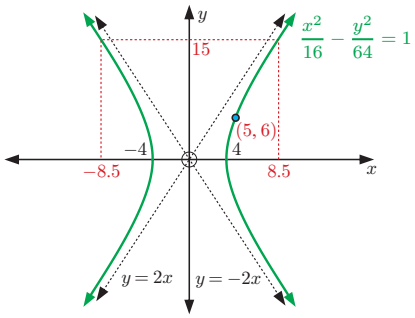
page 601 **ANSWERS REVIEW SET 23,** Question **8 a** should have correct t-axis numbering:

8 **a**



page 605 **ANSWERS EXERCISE 24C.1,** Question **3 c** should include information from parts **a** and **b**:

3 **c**

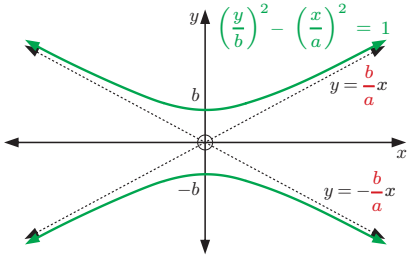


page 606 **ANSWERS EXERCISE 24C.1,** Questions **6 b** and **c** should read:

6 **b** **i** **Hint:** Under a horizontal stretch with scale factor a we replace x by $\frac{x}{a}$.

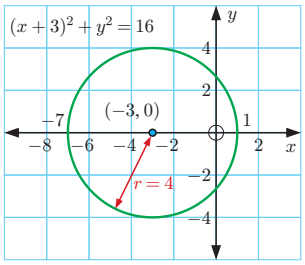
Under a vertical stretch with scale factor b, we replace y by $\frac{y}{b}$.

c



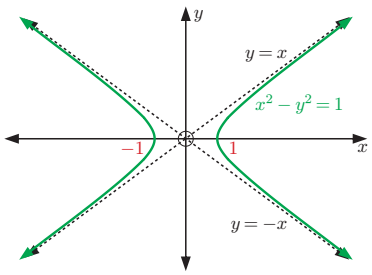
page 607 **ANSWERS REVIEW SET 24,** Question **3 a** should include radius:

3 **a**



page 608 **ANSWERS REVIEW SET 24,** Question **10 a** should include x-axis intercepts:

10 a

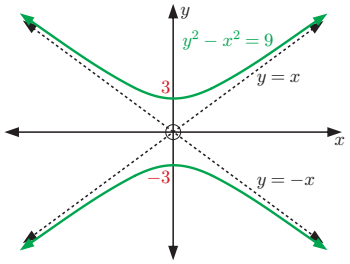


page 608 **ANSWERS PRACTICE TEST 24A,** Question **8** should read:

6 D **7** E **8** D **9** C **10** E

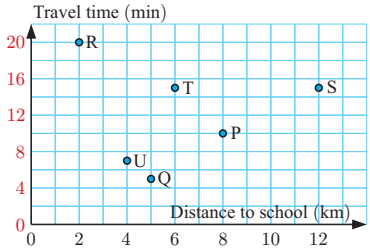
page 608 **ANSWERS PRACTICE TEST 24B,** Question **8** should include y-axis intercepts:

8



page 610 **ANSWERS EXERCISE 25B,** Question **4 a** should have correct y-axis scaling:

4 a



page 612 **ANSWERS EXERCISE 25E.1,** Question **4 f** should read:

4 f **i** 73 diners **ii** 56 diners

page 613 **ANSWERS REVIEW SET 25,** Questions **5 d** and **6 b** should read:

5 d $y \approx -1.12x + 21.3$ **e** 12th

6 b $R \approx -0.0907I + 9.79$

page 613 **ANSWERS PRACTICE TEST 25C,** Question **3** should have correctly labelled parts **e** and **f**:

3 **e** **i** 21 km/h **ii** 31 km/h

f 24 lies within the poles, $\therefore$ **e i** should be reasonably reliable.
40 lies outside the poles, $\therefore$ **e ii** could be unreliable.