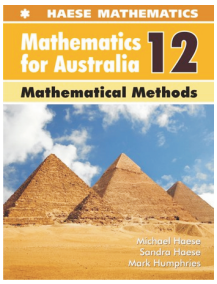


ERRATA

MATHEMATICS FOR AUSTRALIA 12

Mathematical Methods

First edition - 2017 first reprint

The following errata were made on 25/Jul/2017

page 94 **REVIEW SET 3A** Question **15 b**, should read:

15 **b** Show that if $\theta = \widehat{\text{APM}} = \widehat{\text{BPM}}$, then the length of cable is given by

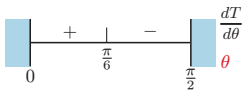
$$L(\theta) = 3 + \frac{2 - \cos\theta}{\sin\theta} \text{ km}.$$

page 312 **ANSWERS EXERCISE 3F** Question **6 e**, should read:

6 **e** **Hint:** You should find $\frac{dW}{dt} = -\frac{1}{50}\ln 2 \times 20e^{-\frac{t}{50}\ln 2}$

page 312 **ANSWERS EXERCISE 3G** Question **9 d**, should read:

9 **c** $\theta = \frac{\pi}{6}$ **d**



page 313 **ANSWERS REVIEW SET 3A** Question **6 b**, should read:

6 **a** $x > 0$

b $f'(x) = 1 + \frac{1}{x}$ $\quad f''(x) = -\frac{1}{x^2}$

$f(x)$ is increasing for all $x > 0$ and is concave downwards for all $x > 0$.

The following erratum was made on 3/Jul/2017

page 26 **REVIEW SET 1B** Question **11**, should read:

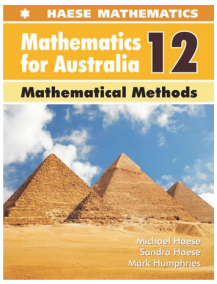
11 The temperature of a mug of water t minutes after it has been poured from a kettle is given by $T = 60e^{-0.1t} + 20$ °C.

Show that it will take $10\ln 3$ minutes for the temperature of the water to fall to 40°C.

The following errata were made on 13/Jun/2017

page 78 **Chapter 3 EXAMPLE 11** Solution, second to last line should read:

$f'(x)$ has a local maximum when $x = -4$ and a local minimum when $x \approx 2\frac{1}{2}$.



ERRATA

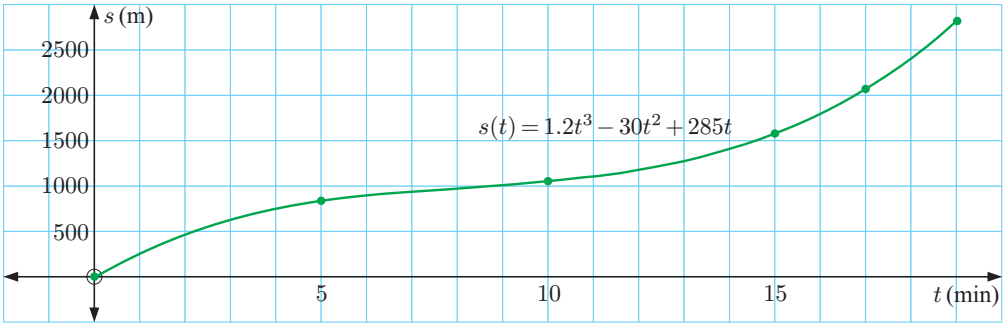
MATHEMATICS FOR AUSTRALIA 12

Mathematical Methods

First edition - 2016 initial print

The following errata were made on 27/Feb/2017

page 60 **Chapter 3 Opening problem** Graph should be:



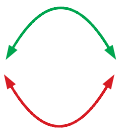
page 301 **ANSWERS REVIEW SET 1A** Question **2 c**, should read:

2 **a** 3 **b** -2 **c** $\frac{5}{2}$ **3** **a** $\ln 7$ **b** $\frac{1}{6}$ **c** $\frac{7}{2}$

The following errata were made on 30/Jan/2017

page 69 **Section 3D** Explanation should read:

When a curve, or part of a curve, has shape:



we say that the curve is **concave downwards**

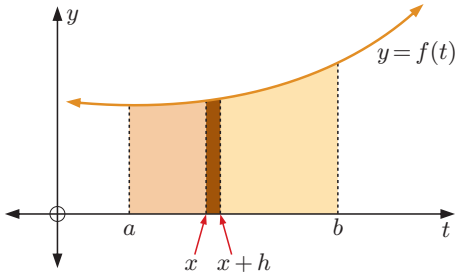
we say that the curve is **concave upwards**.

page 108 **Section 4C** Explanation should keep naming consistent:

Consider the narrow strip between $t = x$ and $t = x + h$. The area of this strip is $A(x+h) - A(x)$, but we also know it must lie between a lower and upper rectangle on the interval $x \leqslant t \leqslant x + h$ of width h.

area of lower rectangle $\leqslant A(x+h) - A(x) \leqslant$ area of upper rectangle

If $f(t)$ is increasing on this interval then



page 312 **ANSWERS EXERCISE 3G** Question **9 e ii**, should read:

9 **e** **ii** Walk from P to R.

page 326 **ANSWERS EXERCISE 8B.1** Question **4 b**, should read:

4 **a** $a = \frac{3}{16}$ **b** $\frac{1}{8}$

page 327 **ANSWERS EXERCISE 8B.2** Question **5 c**, should read:

5 **a** If $k = \frac{1}{2}$, $f(x) < 0$ **b** $k = \frac{1}{3}$ **c** $\frac{11}{25}$

The following errata were made on 9/Jan/2017

page 67 **EXERCISE 3B** Question **8**, should read:

8 Suppose $f(x) = \dfrac{x+k}{x^2+k}$ is never increasing. What range of values could the constant k have?

page 304 **ANSWERS EXERCISE 2E** Question **1 d**, should read:

1 **d** $\dfrac{dy}{dx} = \dfrac{2x+1}{2\sqrt{x}(1-2x)^2}$

page 307 **ANSWERS EXERCISE 3B** Question **8**, should read:

8 $-1 \leqslant k \leqslant 0$

The following erratum was made on 6/Dec/2016

page 308 **ANSWERS EXERCISE 3C** Question **7 d**, should have correct coordinate label for local maximum:

7 **d** $\left(\frac{\pi}{2}, e\right)$ is a local maximum,
$\left(\frac{3\pi}{2}, \frac{1}{e}\right)$ is a local minimum