

ERRATA

MATHEMATICS FOR THE INTERNATIONAL STUDENT MATHEMATICS SL third edition - WORKED SOLUTIONS

Third edition - 2013 first reprint

The following erratum was made on 29/Nov/2018

page 112 **EXERCISE 5A** question **1 d iv**, should read:

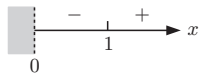
- 1 d iv** Domain is $\{x \mid -5 \leq x \leq 5, x \neq -2\}$
Range is $\{y \mid y < -1, -1 < y \leq 0.333\}$

The following erratum was made on 15/May/2018

page 333 **EXERCISE 16B** question **2 p**, should read:

$$\begin{aligned} \mathbf{2 p} \quad f(x) &= x - 2\sqrt{x} = x - 2x^{\frac{1}{2}} \\ f'(x) &= 1 - x^{-\frac{1}{2}} = 1 - \frac{1}{\sqrt{x}} = \frac{\sqrt{x} - 1}{\sqrt{x}} \end{aligned}$$

Sign diagram
of $f'(x)$:



increasing when $x \geq 1$,
decreasing when $0 < x \leq 1$

The following errata were made on 25/May/2016

page 209 **EXERCISE 11B** question **4**, should not give population as a measure of years:

$$\mathbf{4} \quad P(t) = 400 + 250 \sin\left(\frac{\pi t}{2}\right)$$

page 290 **REVIEW SET 14A** question **1 c**, should read:

$$\begin{aligned} \mathbf{1 c} \quad \lim_{x \rightarrow 4} \frac{x^2 - 16}{x - 4} &= \lim_{x \rightarrow 4} \frac{(x + 4)(x - 4)}{x - 4} \\ &= \lim_{x \rightarrow 4} (x + 4) \quad \{\text{as } x \neq 4\} \\ &= 8 \end{aligned}$$

page 322 **EXERCISE 16A** question **1 e**, should read:

$$\begin{aligned} \mathbf{1 e} \quad &\text{We seek the tangent to} \\ &y = \frac{3}{x} - \frac{1}{x^2} = 3x^{-1} - x^{-2} \quad \text{at } (-1, -4). \\ \text{Now } &\frac{dy}{dx} = -3x^{-2} + 2x^{-3} \\ &= -\frac{3}{x^2} + \frac{2}{x^3} \quad \text{so at } (-1, -4). \\ &\frac{dy}{dx} = -\frac{3}{(-1)^2} + \frac{2}{(-1)^3} \\ &= -3 - 2 \\ &= -5 \\ \therefore &\text{the tangent has equation} \\ &\frac{y - (-4)}{x - (-1)} = -5 \\ \therefore &y + 4 = -5x - 5 \\ \therefore &y = -5x - 9 \end{aligned}$$

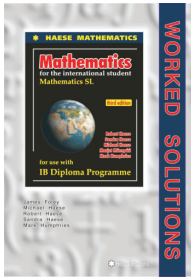
The following errata were made on or before 16/Feb/2016

page 139 **EXERCISE 6F** question **3 c**, should read:

3 c $\sum_{k=1}^{20} \left(\frac{k+3}{2} \right) = 2 + \frac{5}{2} + 3 + \dots + \frac{23}{2}$

This series is arithmetic with $u_1 = 2$, $d = \frac{1}{2}$, and $n = 20$.

$$\therefore \text{sum} = \frac{n}{2} [2u_1 + (n-1)d] = \frac{20}{2} [4 + 19 \times \frac{1}{2}] = 135$$



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page 186 **EXERCISE 9D** question **9**, should read:

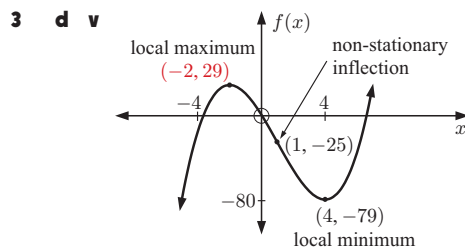
9 Using Pythagoras' theorem

$$RQ = \sqrt{4^2 + 7^2} = \sqrt{65} \text{ cm}$$

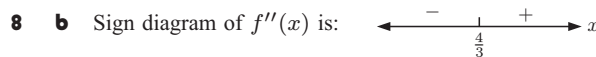
page 228 **EXERCISE 12E** question **4 h**, should read:

$$\mathbf{4 \quad h} \quad 2\mathbf{p} - \mathbf{q} + \frac{1}{3}\mathbf{r} = \begin{pmatrix} 2 \\ 10 \end{pmatrix} - \begin{pmatrix} -2 \\ 4 \end{pmatrix} + \begin{pmatrix} -1 \\ -\frac{1}{3} \end{pmatrix}$$

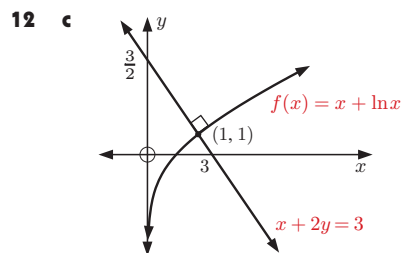
page 342 **EXERCISE 16D.1** question **3 d v**, diagram should have correct local maximum:



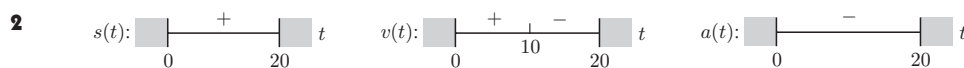
page 358 **REVIEW SET 16C** question **8 b**, should include sign diagram:



page 360 **REVIEW SET 16C** question **12 c**, should have properly labelled functions:



page 363 **EXERCISE 17A.2** question **2**, should have sign diagrams on the interval from 0 to 20:



page 439 **EXERCISE 20B.1** question **16**, should have diagram shown:

16 Possibilities are:

a	5	6	7	8
b	11	10	9	8

$\times$ $\times$ $\checkmark$ $\times$
 $\uparrow$ reject as modes are 8 and 9
 $\uparrow$ reject as modes are 9 and 10
 $\uparrow$ reject as modes are 5 and 9

So, the missing results are 7 and 9.

page 508 **REVIEW SET 23B** question **1**, disregard part **d**.