

ERRATA

MATHEMATICS FOR THE INTERNATIONAL STUDENT MATHEMATICS SL (2nd edition)

Second edition - 2009 initial print run

page 46 **TABLE UNDER SECTION HEADING A** replace second row of table heading

Period (t)	Charge
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page 78 **EXAMPLE 9** replace fourth line of the solution

Using a graphics calculator with $Y_1 = 6 \times (\sqrt{2})^{(X-1)}$, we view a *table of values*:

page 113 **TEXT** last paragraph before the Investigation 2 should read:

e is a special number in mathematics. It is irrational like π , and just as π is the ratio of a circle's circumference to its diameter, e also has a physical meaning. We explore this meaning in the following investigation.

page 186 **REVIEW SET 6B** part **a** should read:

- 1** Consider the quadratic function $y = 2x^2 + 6x - 3$.
 - a** Convert it into the form $y = a(x - h)^2 + k$ by 'completing the square'.

page 190 **TEXT** remove text between **OPENING PROBLEM** and heading **A. BINOMIAL EXPANSIONS**

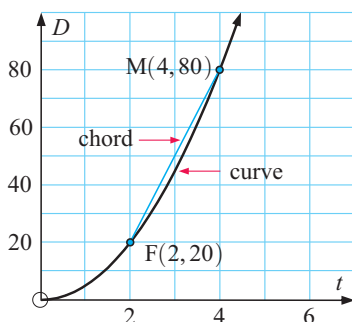
page 288 **EXERCISE 11B.7** second line should read:

- 4 a** Suppose that $\mathbf{AX} = \mathbf{A}$, where $\mathbf{A} = \begin{pmatrix} a & b \\ c & d \end{pmatrix}$ and $\mathbf{X} = \begin{pmatrix} w & x \\ y & z \end{pmatrix}$.
Show that $w = z = 1$ and $x = y = 0$ is a solution.

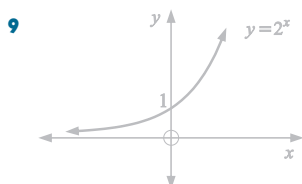
page 395 **EXAMPLE 7** first line of the example should read:

For the data set: 7, 3, 1, 7, 6, 9, 3, 8, 5, 8, 6, 3, 7, 1, 9 find the:

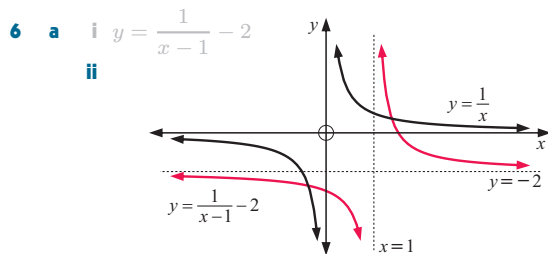
page 469 **INVESTIGATION 2** change labels on D axis:



page 706 **ANSWERS EXERCISE 5A** last line should read:



When $x = 0$,
 $y = 2^0 = 1$ ✓
 $2^x > 0$ for all x as
the graph is always
above the x -axis. ✓



4 $g(x) = -x^2 - 6x - 7$

3 $a = 3$ which is > 0 and $\Delta = k^2 + 12$ which is always > 0
 {as $k^2 \geq 0$ for all k }

11 $r \approx 8.79$ cm, area ≈ 81.0 cm²

1 $\hat{C} \approx 62.1^\circ$ or $\hat{C} \approx 117.9^\circ$
 6 a 91.3°

2 $x \approx 47.5$ or 132.5

1 a $T \approx 6.5 \sin \frac{\pi}{6}(t - 4.5) + 20.5$

3 a $x \approx 0.4, 1.2, 3.5, 4.3, 6.7, 7.5, 9.8, 10.6, 13.0, 13.7$

9 c $x = \frac{16}{3}$

8 a $T \approx 7.05 \sin(\frac{\pi}{6}(t - 10.5)) + 24.75$

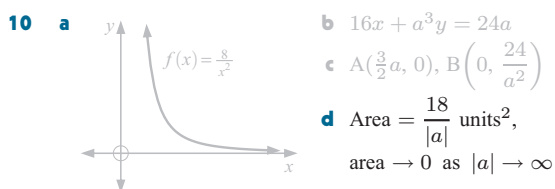
4 a (KL) is parallel to (MN) as $\begin{pmatrix} 5 \\ -2 \end{pmatrix}$ is parallel to $\begin{pmatrix} -5 \\ 2 \end{pmatrix}$
 b (KL) is perpendicular to (NK) as $\begin{pmatrix} 5 \\ -2 \end{pmatrix} \cdot \begin{pmatrix} 4 \\ 10 \end{pmatrix} = 0$
 and (NK) is perpendicular to (MN) as $\begin{pmatrix} 4 \\ 10 \end{pmatrix} \cdot \begin{pmatrix} -5 \\ 2 \end{pmatrix} = 0$

1 a 25.2 cm

5 c ii 0.0267

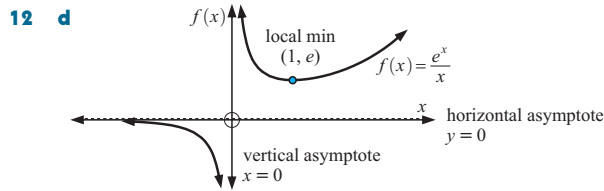
5 a $\bar{x} = \text{€}103.51, s \approx \text{€}19.40$ b $\mu = \text{€}103.51, \sigma \approx \text{€}19.40$

2 a $7.5x^2 - 2.8x$



3 a $v(t) = 3 - \frac{1}{2\sqrt{t}}$ $a(t) = \frac{1}{4t\sqrt{t}}$

e Particle's speed is decreasing for $0 < t \leq \frac{1}{36}$.



18 266 or 267 torches

6 b $s(e) = 25e - 10$ cm, $v(e) = 25 - \frac{10}{e}$ cm min⁻¹,
 $a(e) = \frac{10}{e^2}$ cm min⁻²

4 c $f''(x) = e^x$, $\leftarrow \xrightarrow{+} x$ thus $f(x)$ is concave up for all x .

6 b Sign diag of $f'(x)$ Sign diag of $f''(x)$



7 b rising at 2.73 m per hour

8 b $\sqrt{2}y - 4x = 1 - 2\pi$

4 c ii $\int_0^1 (x^2 - x) dx = -\frac{1}{6}$, the area between $y = x^2 - x$ and the x -axis from $x = 0$ to $x = 1$ is $\frac{1}{6}$ units².

6 i $\frac{1}{2}x^2 + 5 \ln(1 - x) + c, x < 1$

7 b $k = \frac{81}{31}$ (≈ 2.61), $P(X \geq 2) = 0.226$

13 b $\mu \approx 4.47$

4 c 1.25 apples

2 b $b \approx 32.3$ grams

31 b iv $q = 100$

33 a $v(t) = t - \frac{3}{2} \sin\left(2t + \frac{\pi}{2}\right) + 6\frac{1}{2}$ cm s⁻¹ **b** $\frac{\pi + 26}{4}$ cm s⁻¹ (units changed to cm s⁻¹)

40 b Range is $\{y \mid -2.41 \leq y \leq 0.91\}$

e ≈ 1.721 units³

46 d 3

54 d ≈ 10.9 m

55 e i $A = - \int_{\frac{\sqrt{21}-1}{2}}^k \left(-1 + \frac{3}{x^2 + x - 2} \right) dx$

ii ≈ 0.558 units²