

ERRATA

MATHEMATICS FOR AUSTRALIA 12

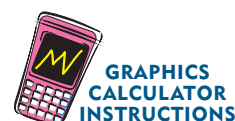
General Mathematics

First edition - 2017 second reprint

The following erratum was made on 19/May/2022

page 177 **CHAPTER 7 SECTION C**, amortisation function instructions added after worked example:

The **amortisation function** on your calculator can be used to quickly find the total interest earned or the balance of the account at any given time.



The following erratum was made on 13/May/2020

page 375 **ANSWERS EXERCISE 4E** Question **3 f**, should read as originally printed:

3 f ≈ 105.3 cents per litre

The following erratum was made on 28/Apr/2020

page 373 **ANSWERS EXERCISE 4B** Question **4 c**, should read as originally printed:

4 c There is a strong, negative, **non-linear** correlation between *number of workers* and *time*.

The following errata were made on 19/Sep/2019

page 390 **ANSWERS EXERCISE 7F** Question **5 a**, should read:

5 a 25 years **5** months **b** \$3693.84 per month

page 390 **ANSWERS REVIEW SET 7A** Question **15 a**, should read:

15 a 8 years **8** months **b** \$2996.23

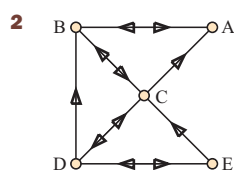
page 391 **ANSWERS EXERCISE 8C.2** Question **2 b**, should read:

2 a \$2001.09 **b** 24 years **8** fortnights

page 392 **ANSWERS REVIEW SET 8A** Question **2 b**, should read:

6 a $\approx 6.55\%$ p.a. **b** \$213 938.**75** **c** 21 years 5 months

page 399 **ANSWERS REVIEW SET 9A** Question **2**, should have no edge connecting A and E:

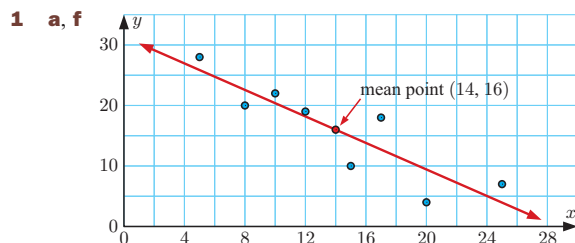


The following errata were made on 11/Sep/2019

page 66 EXERCISE 3D.1 Question 4, should read:

- 4 For the sequence $t_1 = 3$, $t_{n+1} = 2t_n + 2$, $n \geq 1$, find the first term which is greater than 100.

page 374 ANSWERS EXERCISE 4D Question 1, graph's line of best fit should fit better:



page 378 ANSWERS EXERCISE 4G Questions 5 a and c, should be given to 3 significant figures:

- 5 a $V \approx 8040 \times (0.748)^t$ b $\approx \$1880$
 c $\approx 25.2\%$ d ≈ 7.18 years

page 386 ANSWERS EXERCISE 6D Question 4 b, should read:

- 4 a $E \approx 0.0734t + 16.4$ b ≈ 18.6 tonnes per capita

page 386 ANSWERS EXERCISE 6D Question 5 e ii, should read:

- 5 d $S \approx 1.77t + 124$ e i $\approx \$135\,000$ ii $\approx \$125\,000$

page 387 ANSWERS EXERCISE 6D Question 6 f ii, should read:

- 6 e $S \approx 0.0376t + 43.9$ f i $\approx \$43\,900$ ii $\approx \$41\,900$

page 387 ANSWERS REVIEW SET 6A Question 2, should read:

2

Time (days)	1	2	3	4	5	6	7
Number of customers	12	15	11	19	15	12	15
3-point moving average		12.7	15	15	15.3	14	14.3

Time (days)	8	9	10	11	12	13	14
Number of customers	16	16	13	19	15	12	7
3-point moving average	15.7	15	16	15.7	15.3	11.3	

The following errata were made on 02/Sep/2019

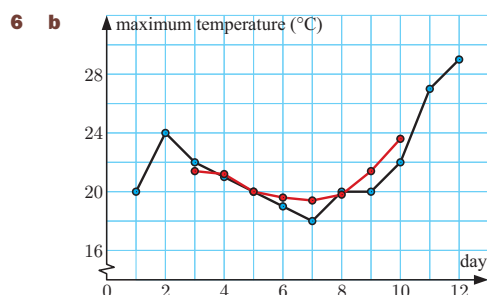
page 372 ANSWERS REVIEW SET 3B Question 7 a, should read:

- 7 a** The population of bacteria after any given hour is 2 times that of the previous hour. So $r = 2$.
The population after 1 hour is $2 \times 5000 = 10\,000$.
So $t_1 = 10\,000$.
 $\therefore t_n = 10\,000 \times 2^{n-1} = 5000 \times 2^n$

page 375 ANSWERS EXERCISE 4E Question 6 f ii, should read:

- 6 f** i 9 hours per week ii ≈ 7.19 hours per week
iii This particular child spent more time watching television than predicted.

page 384 ANSWERS EXERCISE 6B Question 6 b, should have correct x-axis label:



page 386 ANSWERS EXERCISE 6C Questions 9 a and b, should read:

9 a

Quarter	1	2	3	4
Seasonal index	84.9%	91.3%	102.4%	121.6%

- b** Electricity usage in quarter 2 is 8.7% below the yearly average.

page 391 ANSWERS EXERCISE 8C.6 Question 2 b, should read:

1 $\approx \$26\,500$ **2 a** \$2101.07 **b** $\approx \$50\,100$

page 395 ANSWERS EXERCISE 9B.2 Question 10 d, should read:

- 10 d** The value in the connectivity matrix C^4 (30) includes routes which revisit cities, such as $Am \rightarrow Be \rightarrow Pr \rightarrow Be \rightarrow Am$, and includes distinct routes which visit the same combinations of cities, such as $Am \rightarrow Pa \rightarrow Br \rightarrow Co \rightarrow Am$ and $Am \rightarrow Co \rightarrow Br \rightarrow Pa \rightarrow Am$.

page 401 ANSWERS REVIEW SET 9B Question 9 c, should read:

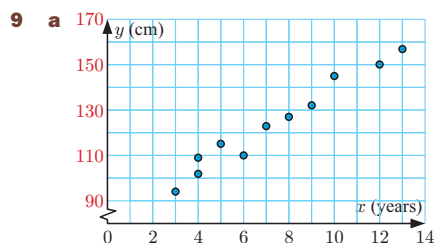
9 c C **d** C

The following errata were made on 11/Jul/2019

page 375 **ANSWERS EXERCISE 4E** Question **3 f**, should read:

3 f ≈ 105.2 cents per litre

page 379 **ANSWERS REVIEW SET 4A** Question **9 a**, should have correct y -axis labels:



page 389 **ANSWERS EXERCISE 7C.1** Question **11 b**, should read:

11 a 5.40% p.a. **b** \$18 228.17

page 390 **ANSWERS EXERCISE 7E.2** Questions **6 c** and **7 c**, should read:

6 a \$66 354.49 **b** \$56 020.65 **c** $\approx 3.44\%$ p.a.
7 a \$22 444.54 **b** \$22 110.15 **c** $\approx 0.502\%$ p.a.

page 390 **ANSWERS REVIEW SET 7B** Question **5 b ii**, should read:

5 a i $\approx 13.9\%$ p.a. **ii** No, it is too high.
b i \$20 639.36 **ii** ≈ 10 years 11 months

page 391 **ANSWERS EXERCISE 8C.4** Question **3 b**, should read:

3 a 5.10% p.a. **b** \$284 652.54

page 392 **ANSWERS EXERCISE 8E** Questions **1 c** and **d**, should read:

1 a \$41.67 **b** \$92.90 **c** \$6459.36 **d** \$7000.16

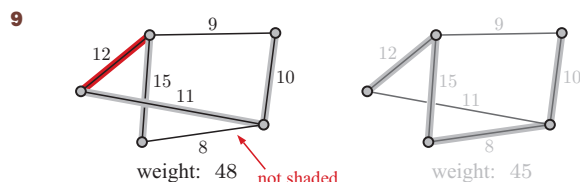
page 392 **ANSWERS REVIEW SET 8A** Question **6 b**, should read:

6 a $\approx 6.55\%$ p.a. **b** \$213 938.76 **c** 21 years 5 months

page 399 **ANSWERS EXERCISE 9D.2** Question **1 c ii**, should read:

1 c ii $\approx 59.2\%$ **iii** $\approx 42.8\%$

page 402 **ANSWERS EXERCISE 10A** Question **9**, third row, first column, spanning tree should be:



The following errata were made on 26/Jul/2018

page 224 **CHAPTER 8 EXAMPLE 8** Solution should read:

Example 8



Gavin has taken out a loan for \$300 000 at 4.9% p.a. interest compounded monthly for 20 years. His monthly repayments are set at \$1963.34. He has an average of \$10 000 in his offset account for the term of the loan.

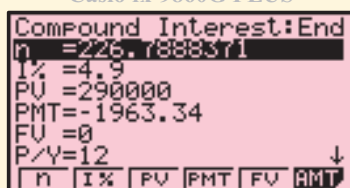
Estimate the amount of interest Gavin will save by having the offset account.

Having \$10 000 in an offset account for the term of a \$300 000 loan is equivalent to borrowing \$290 000.

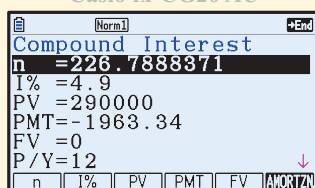
We first find the time Gavin would take to repay the loan.

$$I\% = 4.9, \quad PV = 290\,000, \quad PMT = -1963.34, \quad FV = 0, \quad P/Y = 12, \quad C/Y = 12$$

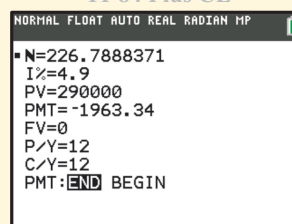
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Casio fx-CG20 AU



TI-84 Plus CE

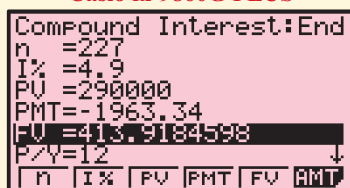


$$\therefore N \approx 226.8$$

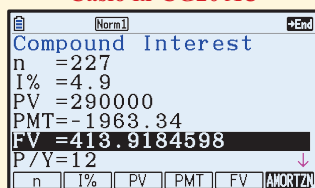
It will take 227 months, or 18 years 11 months to repay the loan.

We now find the future value of the loan after 227 months:

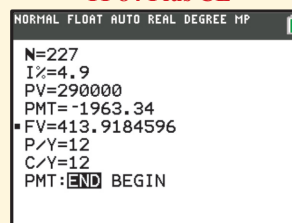
Casio fx-9860G PLUS



Casio fx-CG20 AU



TI-84 Plus CE



Thus Gavin has paid \$413.92 more than required.

So Gavin now needs \$10 000 - \$413.92 = \$9586.08 to pay off the rest of the loan.

$$\begin{aligned} \therefore \text{with the offset account, total repayment} &= \$1963.34 \times 227 + \$9586.08 \\ &= \$455\,264.26 \end{aligned}$$

$$\begin{aligned} \therefore \text{interest saved} &\approx \$471\,201.60 - \$455\,264.26 \\ &\approx \$15\,900 \end{aligned}$$

page 390 **ANSWERS EXERCISE 7E.2** Questions **6 c** and **7 c**, should read:

- 6** a \$66 354.49 b \$56 020.65 c $\approx 3.40\%$ p.a.
7 a \$22 444.54 b \$22 110.15 c $\approx 0.500\%$ p.a.

page 391 **ANSWERS EXERCISE 8C.6** Questions **1** and **2 b**, should read:

- 1** $\approx \$26\,500$ **2** a \$2101.07 b $\approx \$50\,000$

page 392 **ANSWERS REVIEW SET 8B** Question **7**, should read:

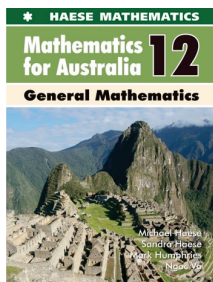
- 7** $\approx \$23\,300$

The following erratum was made on 22/Mar/2018

page 373 ~~ANSWERS EXERCISE 4B~~ Question **4 c**, should read:

- 4 c** There is a strong, negative, ~~linear~~ correlation between *number of workers and time*.

This erratum was made in error, please disregard it.



ERRATA

MATHEMATICS FOR AUSTRALIA 12

General Mathematics

First edition - 2017 first reprint

The following erratum was made on 18/Sep/2017

page 383 **ANSWERS EXERCISE 5C** Question **7**, should read:

7 ≈ 59.6 minutes **8** ≈ 24.7 cm **9** ≈ 75.2 mm

The following erratum was made on 27/Feb/2017

page 375 **ANSWERS EXERCISE 4E** Question **3 d**, should read:

- 3**
- a** $r \approx -0.924$
 - b** There is a strong, negative, linear correlation between the *petrol price* and the *number of customers*.
 - c** $y \approx -4.27x + 489$
 - d** ≈ -4.27 ; this indicates that for every cent per litre the petrol price increases by, the number of customers will decrease by approximately 4.27.