ERRATA FOR INITIAL PRINT RUN

TEXT

page 103 Reciprocal transformation
The diagrams should be:

\[
\begin{align*}
\text{A } \frac{1}{x} \text{ transformation will compress the } x\text{-values to linearise the data.} \\
\text{A } \frac{1}{y} \text{ transformation will compress the } y\text{-values to linearise the data.}
\end{align*}
\]

page 248 Exercise 7C.2
5 Question should begin 'Triangles PQR and SRQ are congruent...'
Diagram should be:

page 312 Exercise 9E
6 c ii C to D

page 366 Exercise 10H
1 a \( y = \frac{2x^2}{3} \)

page 412 Multiple choice questions
2 The constraints should be:
\[
0 \leq x \leq 4;\quad 4 \leq y \leq 8;\quad y \leq 3x
\]

page 429 Exercise 12B.6
1 a the gross capital gain that William made on the painting

page 520 Multiple choice questions
2 D $2.43

page 527 Section A - Terminology
The second paragraph should read:
“\text{A loop} \text{ starts and ends at the same vertex. It counts as one edge, but contributes two to the degree of the vertex.}”

The diagram at the top of the page should be:

\[
\begin{array}{c}
\text{degree 3} \\
\text{isolated vertex, degree 0}
\end{array}
\]

Note: The same corrections need to be made in the summary to chapter 14 on page 598.

page 533 Example 4
The adjacency matrix should be:
\[
\begin{bmatrix}
0 & 0 & 0 & 0 \\
0 & 1 & 1 & 0 \\
1 & 2 & 2 & 0 \\
0 & 1 & 2 & 0
\end{bmatrix}
\]
The last paragraph should be: “There is a 2 in the leading diagonal. This represents the loop on vertex C.”

page 534 Exercise 14C
2 b
\[
\begin{bmatrix}
0 & 2 & 0 & 1 \\
2 & 0 & 0 & 2 \\
0 & 0 & 0 & 0 \\
1 & 2 & 0 & 2
\end{bmatrix}
\]
2 c
\[
\begin{bmatrix}
2 & 1 & 0 & 0 \\
1 & 2 & 1 & 0 \\
0 & 1 & 2 & 1 \\
0 & 0 & 1 & 2
\end{bmatrix}
\]
3
\[
\begin{bmatrix}
0 & 1 & 2 & 0 \\
1 & 2 & 0 & 0 \\
2 & 0 & 2 & 0 \\
0 & 0 & 0 & 0
\end{bmatrix}
\]

page 587 Exercise 15D.3
4 The diagram should be:

page 605 Multiple choice questions
2 The matrix should be:
\[
\begin{bmatrix}
0 & 1 & 1 & 1 \\
1 & 2 & 0 & 1 \\
1 & 0 & 0 & 2 \\
1 & 1 & 2 & 0
\end{bmatrix}
\]

ANSWERS

page 667 Exercise 1E.1
1 b iii 14
4 d The data is positively skewed with no obvious outliers. The number of novels per household is centred around 40.5 (median) ...

page 668 Exercise 1E.2
9 E
**Exercise 2A.2**

5 a Table should be:

<table>
<thead>
<tr>
<th></th>
<th>Plot A</th>
<th>Plot B</th>
<th>Plot C</th>
</tr>
</thead>
<tbody>
<tr>
<td>( n )</td>
<td>30</td>
<td>29</td>
<td>38</td>
</tr>
<tr>
<td>Median</td>
<td>33</td>
<td>48</td>
<td>65</td>
</tr>
<tr>
<td>Min</td>
<td>8</td>
<td>20</td>
<td>39</td>
</tr>
<tr>
<td>Max</td>
<td>50</td>
<td>66</td>
<td>79</td>
</tr>
<tr>
<td>UQ</td>
<td>38</td>
<td>54</td>
<td>70</td>
</tr>
<tr>
<td>LQ</td>
<td>27</td>
<td>43</td>
<td>59</td>
</tr>
<tr>
<td>IQR</td>
<td>11</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>Range</td>
<td>42</td>
<td>46</td>
<td>40</td>
</tr>
</tbody>
</table>

**Exercise 3A.2**

4 ai \( y = 16.4 + 4.63x \)

4 a ii Number of ice-creams sold = \( 16.4 + 4.63 \times \) Maximum daily temperature

**Exercise 3C.3**

4 d \( x^2 \) transformation:

\[
\text{LinReg}
\ y=ax^2+b
\ a=0.013533053
\ b=1.753868035
\ r^2=0.969501735
\ r=0.9846728225
\]

log \( y \) transformation:

\[
\text{LinReg}
\ y=ax+b
\ a=0.0168726484
\ b=1.703867392
\ r^2=0.968695847
\ r=0.9779813791
\]

\( \frac{1}{y} \) transformation:

\[
\text{LinReg}
\ y=ax+b
\ a=-1.95276995
\ b=1.543654197
\ r^2=0.969501735
\ r=0.9846728225
\]

All transformations linearise the data so the one with the highest coefficient of determination is the best model, i.e., the \( \frac{1}{y} \) transformation.

Equation: \( \frac{1}{\text{cherry yield}} = -0.0106 \times \text{the number of frosts} + 0.543 \)

**Exercise 4D.2**

1 b

**Exercise 5F**

9 B

**Exercise 6D**

8 \( t_2 = \frac{14}{3}, \ t_6 = 18 \)

**Exercise 7C.2**

4 41.68 mm

5 a 53.13°

b 106.26°

c 15 mm

**Exercise 10G**

5 a

**Exercise 11B**

7 d \( x \geq 8, \ 5x + 4y \geq 100, \ x + 2y \geq 30 \)

**Exercise 11C**

3 \( x \geq 40, \ y \geq 0, \ y \geq 2x, \ x + y \leq 150 \)

8 a \( x \geq 3, \ y \geq 0, \ 8x + 5y \geq 120 \)

**Exercise 11D**

4 Last line should be:

80 loaves and 60 rolls for a maximum profit of $111.

**Exercise 11D**

8 Diagram should be:

14 Diagram should be:
Analysis questions C: Book binding
1 e  a = 2,  b = 3,  c = −2000,  d = 2000

Exercise 12B.6
1 a $40500

Exercise 12D
7 a $6120, $6137.88, $6187.25, $6304.81, $6638.76, $6877.96
7 b $6120, $6137.88, $6187.25, $6304.81, $6638.76, $6877.96

Exercise 13B.2
2 3 years

Exercise 13C
1 $684, $672.59, simple interest

Exercise 13D
7 a $15592.93
7 b $20655.20 i.e., an additional $5062.27

Exercise 13H
16 Last sentence should be:
Options have very similar flat rates but the effective rate for Option A is lower hence Option A is financially the better option.

Exercise 14A
4 a 10
4 c 8
4 d 14

Exercise 14C
1 d \[
\begin{bmatrix}
0 & 0 & 0 & 0 \\
0 & 2 & 1 & 0 \\
0 & 1 & 0 & 2 \\
0 & 0 & 2 & 0 \\
\end{bmatrix}
\]
1 e \[
\begin{bmatrix}
2 & 2 \\
2 & 2 \\
\end{bmatrix}
\]

Exercise 14H.1
5 c iii 37

Exercise 15C
8 d The end road 38.