

ERRATA FOR INITIAL PRINT RUN

TEXT

pages 11, 18-20, 33, 34, 68, 69, 73, 74, 77, 82, 83, 639, 643

The symbol for subset should be \subseteq .

pages 126-128, 137-139, 143-146, 153, 162, 163, 646-648, 699

replace the word 'ogive' with 'cumulative frequency graph'

page 68 **Counting in a set**

2nd line should read The set $A = \{2, 4, \dots\}$

page 154 **Exercise 5I.2**

2 standard deviations should be 8.5 and 8.0, respectively.

page 497 **Exercise 15A.1**

4 ii replace 'negative' with 'negation'

page 501 **Exclusive disjunction**

p or q means p or q but not both.

page 501 **Exercise 15B**

3 y : Sergio... tomorrow, write down in symbolic form:

page 578 **Pearson's correlation coefficient**

second column should read:

$$s_{xy} = \dots \text{ or } = \frac{\sum xy}{n} - \bar{x}\bar{y}$$

$$s_x = \dots \text{ or } = \sqrt{\frac{\sum x^2}{n} - \bar{x}^2}$$

$$s_y = \dots \text{ or } = \sqrt{\frac{\sum y^2}{n} - \bar{y}^2}$$

$$r = \dots \text{ or } = \frac{\sum xy - n\bar{x}\bar{y}}{\sqrt{\sum x^2 - n\bar{x}^2} \sqrt{\sum y^2 - n\bar{y}^2}}$$

page 579 **Example 1**

$$r = \frac{73 - 4\left(\frac{12}{4}\right)\left(\frac{20}{4}\right)}{\sqrt{46 - 4 \times 3^2} \sqrt{118 - 4 \times 5^2}}$$

$$\therefore r = \frac{13}{\sqrt{10}\sqrt{18}}$$

page 580 **Example 3**

$$\therefore r = \frac{121 - 5\left(\frac{25}{5}\right)\left(\frac{30}{5}\right)}{\sqrt{155 - 5(5)^2} \sqrt{218 - 5(6)^2}}$$

$$\doteq 0.859$$

page 580 **Exercise 18B.1**

1 a ... find r using $r = \frac{\sum xy - n\bar{x}\bar{y}}{\sqrt{\sum x^2 - n\bar{x}^2} \sqrt{\sum y^2 - n\bar{y}^2}}$

ANSWERS

page 648 **Exercise 5I.1**

2 answer should be: $\bar{x} = 1.69, s = 0.182$

ERRATA FOR FIRST REPRINT

TEXT

page 380 **Uniform solids**

The equation for the volume of a cylinder should be:

$$\begin{aligned} V &= l \times A \\ &= l \times \pi r^2 \\ &= \pi r^2 l \end{aligned}$$

ANSWERS

page 672 **Exercise 14C**

3 a i $\doteq 0.550$

ii $\doteq 0.563$

page 674 **Exercise 15A.1**

2 a Answer should be:

Not all rectangles are parallelograms - statement is true

ERRATA FOR SECOND REPRINT

TEXT

page 282 **Example 8 solution**

a Second line should read:

$$C(4) = 5(4) + 3$$

page 312 **Example 36 solution**

Since $a < 0$, shape is



page 400 **Opening Problem**

The opening paragraph should read:

"A circular stadium consists of sections as illustrated, with aisles in between. The diagram shows the tiers of concrete for the final section, **Section K**. Seats are to be placed along every concrete step, with each seat being 0.45 m wide. AB, the arc at the front of the first row is 14.4 m long, while CD, the arc at the back of the back row is 20.25 m long."

The angle 32° in the diagram should be removed.

page 452 **Review set 13B**

1 The 8.5% interest is compound interest.

page 516 **Review set 15C**

1 Question should start: "Given p : x is a multiple of 4, ..."

page 570 **Review set 17B**

4 d Question should be: "What is the y -intercept?"

page 622 **Example 12 solution**

a Second line should read:

{Since tangents have gradients > 0 on these intervals}

ANSWERS

page 639 **Exercise 1C**

1 c 45

4 c 0

page 640 **Exercise 2F.2**

9 e 52 596 deaths per year {using 1 year = 365.25 days}

page 641 **Exercise 2H**

11 between 144.375 cm^3 and 248.625 cm^3

12 between 1502.1 cm^3 and 1545.7 cm^3

page 641 **Exercise 2I**

2 a i -1.238 kg c i -3.8 L d i -22 hours

page 641 **Review set 2B**

12 b 6.7%

page 641 **Exercise 3B**

1 b $C' = \{\text{natural numbers}\}$

5 g $B' \cup C = \{1, 2, 5, 6, 7, 8, 9, 10, 11, 12\}$

8 d $n(M \cup N) = 9; n(M) + n(N) - n(M \cap N) = 7 + 4 - 2 = 9$

page 643 **Review set 3B**

1 a The set of all x is a negative integer between -4 and 0 .

page 644 **Exercise 4B**

9 c \$73 614

page 644 **Exercise 4D**

14 b 4276 m

page 644 **Exercise 4G**

2 11.6 cm

page 645 **Review set 4C**

3 b 11.3 m

page 646 **Exercise 5E**

3 c i 60 nights

page 647 **Exercise 5E**

4 c i 78%

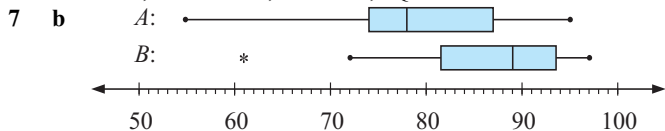
page 648 **Exercise 5F.4**

6 b 36% c i 0.53 ii 0.030

page 648 **Exercise 5I.1**

5 $\bar{x} = 17.45, s^2 = 61.95, s = 7.87, \text{IQR} = 11$

6 $\bar{x} = 25.7, s^2 = 178.0, s = 13.3, \text{IQR} = 20$



page 650 **Review set 5A**

5 e i $\div 81.3$ m

page 651 **Exercise 6E**

5 a 7920 cm^3

page 651 **Exercise 6F**

5 e $\frac{b}{s}$

page 652 **Exercise 6J**

3 a 0.142857 b 0.142857

page 652 **Exercise 6K**

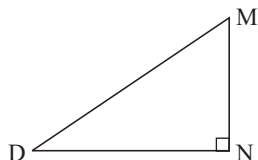
7 h $\frac{1}{m^5}$

page 659 **Exercise 9F**

4 c no

page 666 **Exercise 10E.3**

3 a



page 667 **Review set 10C**

9 $AC = 12.6 \text{ cm}, \angle A = 48.2^\circ, \angle C = 57.8^\circ$

page 668 **Exercise 11B.1**

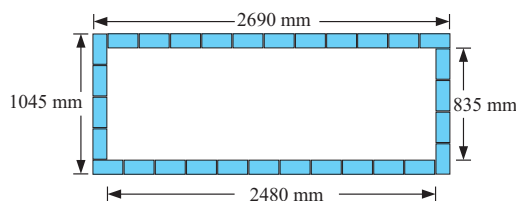
1 b 18 m c 21 m

page 668 **Exercise 11F.2**

1 a 390 cm^3 i 2940 cm^3

page 669 **Exercise 11I**

1 b



page 669 **Review set 11C**

9 d \$4665

page 670 **Exercise 12E**

6 £53 519.29

page 670 **Review set 12B**

7 $u_n = \pm \frac{1}{6} \times 2^{n-1}$

page 670 **Exercise 13A.2**

2 \$1718.63 CAN 5 68 615.56 rupees

page 670 **Exercise 13A.3**

1 b ii $\div 175$ euro

page 671 **Exercise 13A.4**

1 a \$2486.81 US c \$18 759.94 NZ d 22 994.61 Thai baht
e 110 830.84 Yen

page 671 **Exercise 13C.1**

1 b \$1170.26

page 671 **Exercise 13C.2**

1 \$9021.58 2 \$301.26 3 c \$8243.81

page 671 **Exercise 13C.4**

1 \$6630.98 2 \$4079.77 3 \$4159.08
4 a 308.92 rupees interest c 80 162.42 baht

page 671 **Exercise 13C.8**

3 c \$1776

page 671 **Review set 13A**

2 248.61 euro 8 a \$21 297.85 b \$26 702.14

page 672 **Review set 13B**

2 \$31 772.58

page 672 **Exercise 14C**

3 a ii $\div 0.55$ c $\div 0.563$

page 673 **Exercise 14H**

2 c 0.00522

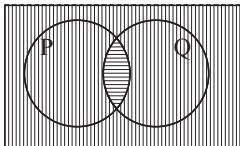
page 675 **Exercise 15A.2**

3 a ii Let P be the truth set of p .
The truth set of $\neg p$ is $P' = \{9, 10, 11, 12, 13, 14\}$
b ii Let P be the truth set of p .
The truth set of $\neg p$ is $P' = \{0, 1, 3, 5, 7, 9\}$

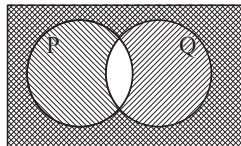
page 675 **Exercise 15B**

10 b i Either p or q or both are true statements.
ii Either p or q or both are false statements.

2



$P \cap Q$
 $(P \cap Q)'$

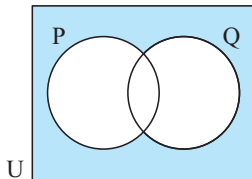


P' Q'
 $P' \cup Q'$ is shaded as ,
 or

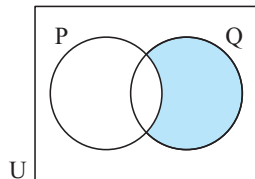
4 f $(p \Leftrightarrow q) \wedge \neg p$

T	F	F
F	F	F
F	F	T
T	T	T

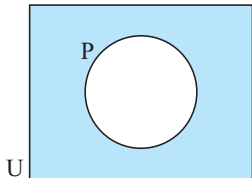
5 b



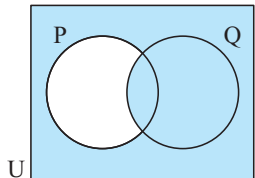
c



d



e



5 c $p \wedge q \wedge r$

7 f

F
T
F
F

(Neither)

2 a $(p \Rightarrow q) \wedge \neg p \Rightarrow \neg q$

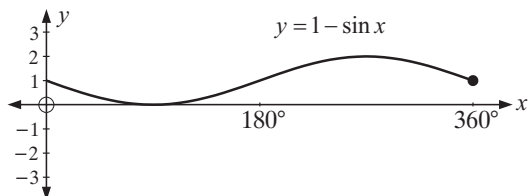
T	F	F	T*	F
F	F	F	T	T
T	T	T	F	F
T	T	T	T	T

invalid

4 g 2010; 56 100 people, 2050; 115 000 people

3 g 2012

2 c



3 c on the 4th, 13th and 20th days

7 c $0.810 \leq t \leq 2.19$ and $6.81 \leq t \leq 8$

1 diagrams from parts d and e are swapped

1 c local min should be at $(-1.16, -57.4)$

d local max should be at $(-1.97, 150.1)$ and $(2.97, 150.1)$

1 d local min should be at $(-2.27, -17.3)$

1 d local min should be at $(-4.83, -0.0358)$

2 d ii Amplitude = 0.75

3 e $(30^\circ, 0.5), (150^\circ, 0.5), (270^\circ, -1)$

1 c \$50 /item sold

9 b Answer should start: " $C'(300) = 19.26$ dollars per item..."

4 d $\frac{dC}{dx} = 27 - \frac{3x^2}{4}, \frac{dC}{dx} = 0$ when $x = 6$.

8 d Equation should be: $y = 4x^2 + \frac{600}{x}$

ERRATA FOR THIRD REPRINT

TEXT

Last line of solution should be:

$= 180.25 \pm 14 \text{ cm}^2$

Second dot point of note should start:

Likewise if three sets A, B and C are **disjoint** and **exhaustive** then...

Solution should end:

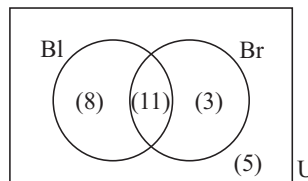
a A and B are disjoint (or mutually exclusive)

b A and B are disjoint and exhaustive

a Last line should be:

$\therefore a = 8, c = 3, d = 5$

b Diagram should be:



Definition should be:

The **negation** of a proposition is its negative.

The truth table should be:

p	$\neg p$	$p \vee \neg p$
T	F	T
F	T	T

page 510 **Example 11**

Conclusion is: r : Jane cannot fly.

The argument should be written as $\frac{p}{q}$ premise
 r conclusion

page 515 **Review set 15B**

Remove: "Avoid the word 'not' if possible"

page 585 **Example 4**

Solution should start:

So, $\sum x = 9$, $\sum y = 14$, $\sum xy = 48$, $\sum x^2 = 35$, $n = 3$

$$\bar{x} = \frac{\sum x}{n} = \frac{9}{3} = 3 \quad \text{and} \quad \bar{y} = \frac{\sum y}{n} = \frac{14}{3}$$

$$s_{xy} = \frac{\sum xy}{n} - \bar{x}\bar{y} = \frac{48}{3} - 3 \times \frac{14}{3} = 2$$

$$s_x^2 = \frac{\sum x^2}{n} - \bar{x}^2 = \frac{35}{3} - 3^2 = \frac{8}{3}$$

page 622 **Increasing / decreasing intervals**

Remove definition and note at top of page.

page 622 **Example 12**

Solution should be:

a $f(x)$ is increasing for $x \leq -1$ and $x \geq 2$.

b $f(x)$ is decreasing for $-1 \leq x \leq 2$.

page 623

In the top dot point:

$f(x) = x^2$ is decreasing for $x \leq 0$.

$f(x) = x^2$ is increasing for $x \geq 0$.

page 623 **Example 13**

Last line of solution should be:

So, $f(x)$ is decreasing for $x \leq 0$ and $x \geq 0$ and is increasing for $0 \leq x \leq 2$.

ANSWERS

page 674 **Exercise 15A.1**

4 c not negation - the problem could be impossible to solve

5 No

6 d This garage is not a mess.

page 678 **Review set 15B**

2 a Eddy is not good at football.

c The writing is not illegible.

d Ali does not own a new car.

page 693 **Review set 18A**

2 $\chi_{\text{calc}}^2 \doteq 7.37$, $df = 2$, $p \doteq 0.0251$

As $\chi_{\text{calc}}^2 < 9.21$ we accept H_0 , that wearing a seat belt and injury or death are independent, at a 1% level.

page 694 **Exercise 19H.1**

1 f i all real x

page 694 **Exercise 19H.2**

All $>$ and $<$ signs should be \geq and \leq .

1 b decreasing for all x

page 695 **Exercise 19J**

5 c $\frac{dR}{dT} \geq 0$ (i.e., inc) for all $T \geq -10^\circ\text{C}$

page 696 **Review set 19B**

6 b increasing for $x \leq -2$ and $x \geq 3$

decreasing for $-2 \leq x \leq 3$

ERRATA FOR FIFTH REPRINT

TEXT

page 253 **Example 27**

b Question should read $10x^2 - 23x - 5$

ANSWERS

page 677 **Review set 15A**

2 b x is either an even number or divisible by 3.

c x is either an even number or is divisible by 3 but not both.

d If x is an even number then x is divisible by 3.

f x is either not an even number or is divisible by 3 but not both.

g If x is an even number then x is not divisible by 3.

h If x is not an even number then it is not divisible by 3.

ERRATA FOR SIXTH REPRINT

TEXT

page 178 **Example 16**

a Speech bubble should read:

Remember that if $x^2 = k$, then $x = \pm\sqrt{k}$

page 282 **Example 8**

a Second line of solution should be:

$$C(4) = 5(4) + 8$$

ERRATA FOR SEVENTH REPRINT

TEXT

page 60 **Exercise 2H**

12 Question should finish

... Give your answer correct to 1 decimal place.

page 61 **Exercise 2H**

13 Question should finish

... for the cylinder's volume, correct to 1 decimal place.

14 Question should finish

... for its volume, correct to 1 decimal place.