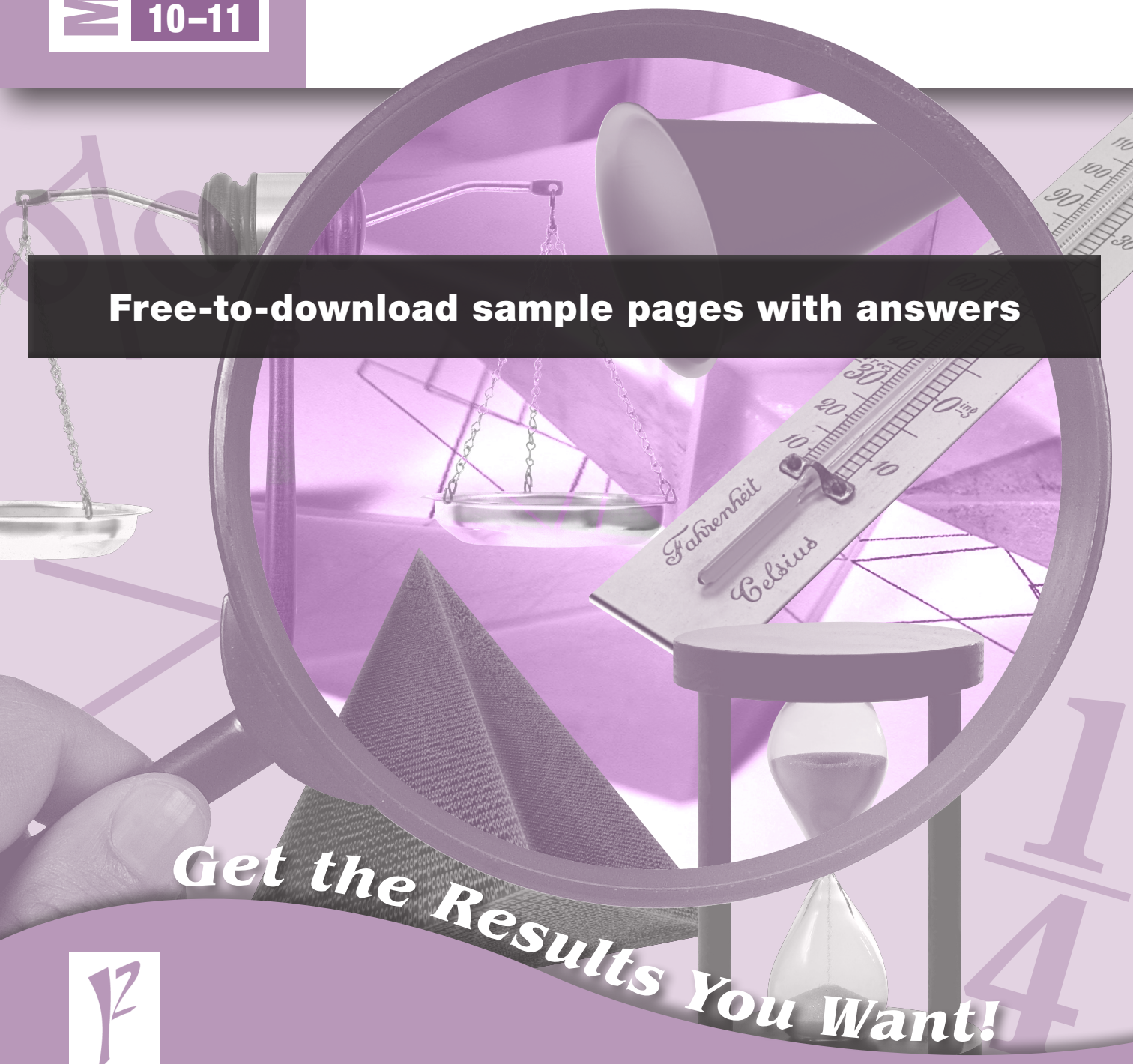
Excel

ADVANCED SKILLS

MATHS YEAR 5 AGES 10–11

START UP MATHS



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PASCAL PRESS

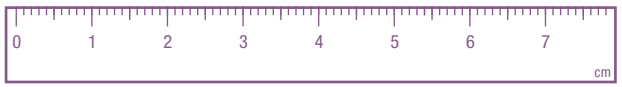
Damon James

UNIT 135

See **START UPS** page 12

Length in mm (1)

1. **Label** the following lengths as a–f on the ruler:



a 6 cm b 15 mm c 34 mm
d 1.8 cm e 20 mm f 2.6 cm

2. Use **decimal form** to write each of the following in **centimetres**.

a 92 mm _____
b 41 mm _____
c 38 mm _____
d 95 mm _____
e 109 mm _____
f 153 mm _____

3. Use **millimetres** to write each of the following:

a 1.7 cm _____
b 2.2 cm _____
c 8.7 cm _____
d 4.1 cm _____
e 12.6 cm _____
f 15.7 cm _____

4. Select the **best unit** of measurement (mm, cm, m or km) to measure the:

a width of a toothpick _____
b height of a house _____
c length of a book _____
d length of a basketball court _____
e width of a piece of paper _____
f length of a car _____

5. **Label** 14 mm as g on the ruler of question 1.

6. Use **decimal form** to write 125 mm in **centimetres**.

_____

7. Use **millimetres** to write 3.3 cm.

_____

8. Select the **best unit** of measurement (mm, cm, m or km) to measure the length of the Sydney Harbour Bridge. _____

9. **Measure** to the **nearest cm** the length of the following line:

UNIT 136

See **START UPS** page 13

Length in mm (2)

1. **Name the measurement** which would be used for:

a the thickness of a finger nail _____
b the distance between two towns _____
c the height of a netball ring _____
d the length of a pencil _____
e the length of a whiteboard _____
f the width of a computer screen _____

2. **Measure** each of the following lines to the **nearest mm**:

a
b
c
d
e
f

3. **Change** each of the following to **millimetres**:

a 9 cm _____
b 21 cm _____
c 4.3 cm _____
d 7.5 cm _____
e 1.6 cm _____
f 93 cm _____

4. **Change** each of the following to **centimetres**:

a 72 mm _____
b 16 mm _____
c 50 mm _____
d 48 mm _____
e 192 mm _____
f 365 mm _____

5. **Name the measurement** which would be used to measure the length of a single train carriage. _____

6. **Measure** the line to the **nearest mm**. _____

7. **Change** 102 cm to **millimetres**. _____

8. **Change** 127 mm to **centimetres**. _____

9. **Measure** the **length and breadth** of the rectangle in mm. What is the total length around the rectangle in **mm and cm**?

_____
_____
_____
_____

☞ Answers on page 145

UNIT 137

See **START UPS** page 13

Length in km (1)

1. Circle the distances that would be measured in **kilometres**:
   - a your height
   - b the distance between Sydney and Melbourne
   - c the length of a bus
   - d the length of the Murray River
   - e the width of Sydney Harbour
   - f the length of a football field
2. Find how many **metres** in each of the following:
   - a 4 km _____
   - b 6 km _____
   - c 1 km _____
   - d 9 km _____
   - e 11 km _____
   - f 15 km _____
3. Find how many **kilometres** in each of the following:
   - a 9000 m _____
   - b 3000 m _____
   - c 5000 m _____
   - d 2000 m _____
   - e 12 000 m _____
   - f 17 000 m _____
4. Write each of the following speeds as **kilometres per hour** (km/h):
   - a 60 km travelled in 1 hour _____
   - b 40 km travelled in 1 hour _____
   - c 100 km travelled in 1 hour _____
   - d 200 km travelled in 2 hours _____
   - e 160 km travelled in 2 hours _____
   - f 550 km travelled in 5 hours _____
5. Would the length of a plane be measured in **kilometres**?

   _____
6. Find how many **metres** there are in 7 km.

   _____
7. Find how many **kilometres** there are in 10 000 m.

   _____
8. Write 180 km travelled in three hours as **kilometres per hour** (km/h).

   _____
9. **List three** objects/distances that would be measured in kilometres.

   _____

☞ Answers on page 145

UNIT 138

See **START UPS** page 13

Length in km (2)

1. **Give the unit** that would be used to measure:
   - a the length of a classroom _____
   - b the distance between Sydney and New Zealand _____
   - c the distance around a house _____
   - d the length of a table _____
   - e the perimeter of a school fence _____
   - f the distance walked in one day _____
2. Find how many **kilometres** in each of the following:
   - a 4000 m _____
   - b 11 000 m _____
   - c 7000 m _____
   - d 23 000 m _____
   - e 5000 m _____
   - f 20 000 m _____
3. Find how many **metres** in each of the following:
   - a 6 km _____
   - b 9 km _____
   - c 14 km _____
   - d 8 km _____
   - e 3 km _____
   - f 2 km _____
4. **Convert** each of the following to **kilometres**:
   - a 2500 m _____
   - b 3640 m _____
   - c 1090 m _____
   - d 3580 m _____
   - e 2905 m _____
   - f 4756 m _____
5. **What unit** would be used to measure the length of the Nile River? _____
6. Find how many **kilometres** there are in 18 000 m.

   _____
7. Find how many **metres** there are in 12 km.

   _____
8. **Convert** 2385 m to **kilometres**.

   _____
9. **Convert** the following from **kilometres to metres**:
   - a 9.610 km _____
   - b 4.318 km _____
   - c 6.045 km _____

UNIT 139

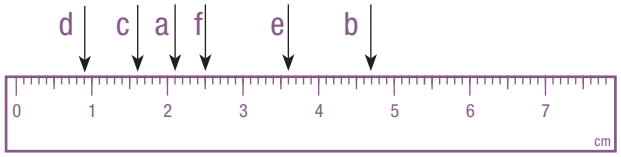
See **START UPS** page 13

Length with decimals

1. Tick the **most appropriate unit** of measurement for the following:

		mm	cm	m	km
a	length of pool				
b	length of highway				
c	thickness of strand of hair				
d	length of calculator				
e	distance from Melbourne to Perth				
f	thickness of mouse pad				

2. **Record** each of the lengths marked on the ruler:



a ____ mm ____ cm b ____ mm ____ cm

c ____ mm ____ cm d ____ mm ____ cm

e ____ mm ____ cm f ____ mm ____ cm

3. Use **decimal form** to write each of the following in **metres**:

a 837 cm _____ b 149 cm _____

c 398 cm _____ d 915 cm _____

e 1024 cm _____ f 1179 cm _____

4. **Convert** each of the following measurements to the indicated length:

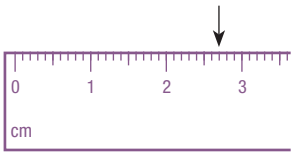
a 37 cm = _____ mm b 220 cm = _____ m

c 8.5 m = _____ cm d 2490 m = _____ km

e 32 mm = _____ cm f 6.5 m = _____ cm

5. Circle the **most appropriate unit** of measurement for the width of a refrigerator: mm cm m km

6. **Record** the length marked on the ruler:



_____ mm

_____ cm

7. Use **decimal form** to write 856 cm as **metres**.

_____

8. **Convert** 3.2 m to _____ cm.

9. Write an **appropriate measuring device** for measuring:

a the perimeter of your school _____

b the length of your drink bottle _____

c the circumference of a bin _____

UNIT 140

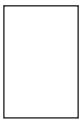
See **START UPS** page 13

Perimeter (1)

1. **Measure** accurately the **length and breadth** of each shape:

a 

l = ____ b = ____

b 

l = ____ b = ____

c 

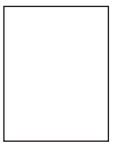
l = ____ b = ____

d 

l = ____ b = ____

e 

l = ____ b = ____

f 

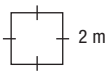
l = ____ b = ____

2. Find the **perimeter** of each of the shapes in question 1.

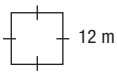
a P = _____ b P = _____ c P = _____

d P = _____ e P = _____ f P = _____

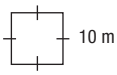
3. Find the **perimeter** of each of the following squares:

a 

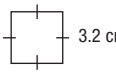
P = _____

b 

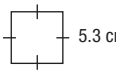
P = _____

c 

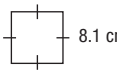
P = _____

d 

P = _____

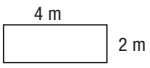
e 

P = _____

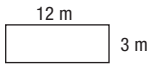
f 

P = _____

4. Find the **perimeter** of each of the following rectangles:

a 

P = _____

b 

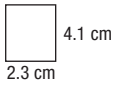
P = _____

c 

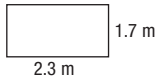
P = _____

d 

P = _____

e 

P = _____

f 

P = _____

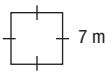
5. **Measure** accurately the **length and breadth** of:

l = ____ b = ____

6. What is the **perimeter** of the shape in question 5?

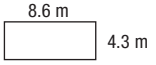
_____

7. Find the **perimeter** of the square:



_____

8. Find the **perimeter** of the rectangle:



_____

9. Anthony needs to fence his swimming pool area. The area is 15.3 m long and 8.2 m wide. **How much** fencing does he need? _____

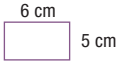
☞ Answers on page 145

UNIT 141

See **START UPS** page 13

Perimeter (2)

1. Find the **perimeter** of each of the following rectangles:

a 

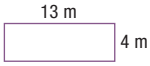
$P =$ _____

b 

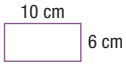
$P =$ _____

c 

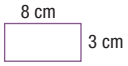
$P =$ _____

d 

$P =$ _____

e 

$P =$ _____

f 

$P =$ _____

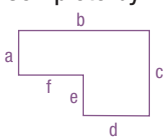
2. **Complete** the table for rectangles with the given measurements:

	Length	Breadth	Perimeter
a	4 cm	7 cm	
b	2 cm	10 cm	
c	8 cm	12 cm	
d	20 m	15 m	
e	25 m	10 m	
f	50 m	20 m	

3. Circle the **correct perimeter** for each of the following squares with the measurements:

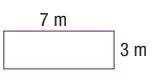
	Length	Perimeter		
a	4 cm	16 cm	12 cm	20 cm
b	5 cm	50 cm	25 cm	20 cm
c	10 cm	100 cm	50 cm	40 cm
d	9 m	27 m	36 m	54 m
e	20 m	200 m	100 m	80 m
f	15 m	60 m	30 m	150 m

4. Complete by **measuring each side**:



a _____ b _____
c _____ d _____
e _____ f _____

5. Find the **perimeter** of the rectangle:



_____

6. **Complete** the table for a rectangle with the given measurements:

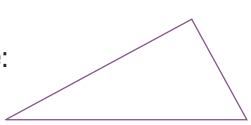
Length	Breadth	Perimeter
10 m	4 m	

7. Circle the **correct perimeter** for a square with side length:

Length	Perimeter		
$2\frac{1}{2}$ cm	10 cm	25 cm	5 cm

8. Add a to f of question 4 to find the **perimeter** of the shape. _____

9. Find the **perimeter** of the triangle:



_____

Answers on page 145

UNIT 142

See **START UPS** page 13

Perimeter (3)

1. Find the **perimeter** of each of the following shapes:

a 

$P =$ _____

b 

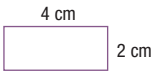
$P =$ _____

c 

$P =$ _____

d 

$P =$ _____

e 

$P =$ _____

f 

$P =$ _____

2. **Draw** on the **grid paper** each of the following shapes:

a a rectangle with sides 4 mm and 7 mm

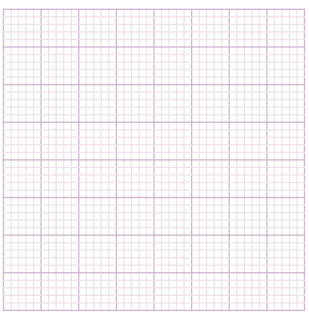
b a square with 2 mm sides

c a rectangle with sides 9 mm and 3 mm

d a square with 3 mm sides

e a rectangle with sides 2 mm and 6 mm

f a square with 5 mm sides



3. Find the **perimeter** of each of the shapes in question 2:

a $P =$ _____ b $P =$ _____ c $P =$ _____
d $P =$ _____ e $P =$ _____ f $P =$ _____

4. Find the **perimeter** of each of the following:

a a square with side length 3.2 m _____

b a rectangle with length 2.6 cm and breadth 1.4 cm

_____

c a square with side length 4.5 cm _____

d a rectangle with length 18.1 m and breadth 10.6 m

_____

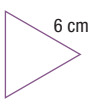
e an equilateral triangle with side length 2.5 cm

_____

f a regular pentagon with side length 1.2 cm

_____

5. Find the **perimeter** of:



6. **Draw** on the **grid paper** a square with 4 mm sides. _____

7. Find the **perimeter** of the shape in question 6.

_____

8. Find the **perimeter** of a **regular octagon** with side lengths 2.2 cm. _____

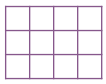
9. **Draw** an irregular shape with a **perimeter** of 10 cm.

UNIT 143

See **START UPS** page 13

Area (1)

1. Find the **area** of each of the following rectangles (each square has a side length of 1 cm):



a $A =$ ____ cm^2

b $A =$ ____ cm^2

c $A =$ ____ cm^2

d $A =$ ____ cm^2

e $A =$ ____ cm^2

f $A =$ ____ cm^2

2. Measure the **length and breadth** of each of the following rectangles:

a 

$l =$ ____ $b =$ ____

b 

$l =$ ____ $b =$ ____

c 

$l =$ ____ $b =$ ____

d 

$l =$ ____ $b =$ ____

e 

$l =$ ____ $b =$ ____

f 

$l =$ ____ $b =$ ____

3. Find the **area** of each of the rectangles in question 2:

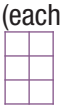
a $A =$ _____ b $A =$ _____ c $A =$ _____

d $A =$ _____ e $A =$ _____ f $A =$ _____

4. Circle the **correct areas** for each rectangle with the following measurements:

	Length	Breadth	Area		
a	6 cm	2 cm	8 cm^2	10 cm^2	12 cm^2
b	10 cm	4 cm	40 cm^2	14 cm^2	28 cm^2
c	9 cm	6 cm	30 cm^2	54 cm^2	15 cm^2
d	7 m	4 m	28 m^2	24 m^2	22 m^2
e	12 m	5 m	50 m^2	60 m^2	34 m^2
f	8 m	7 m	30 m^2	44 m^2	56 m^2

5. Find the **area** of (each square has a side length of 1 cm):



$A =$ ____ cm^2

6. Measure the **length and breadth** of:

$l =$ ____ $b =$ ____

7. Find the **area** of the rectangle in question 6: _____

8. Circle the **correct area** for the following rectangle:

Length	Breadth	Area		
3 m	9 m	24 m^2	27 m^2	30 m^2

9. What is the **perimeter and area** of an indoor cricket court 30 m long and 15 m wide?

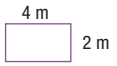
_____

UNIT 144

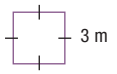
See **START UPS** page 13

Area (2)

1. Find the **area** of each of the following:

a 

_____

b 

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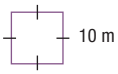
c 

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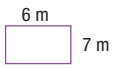
d 

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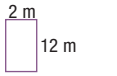
e 

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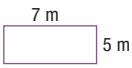
f 

_____

2. Circle the **correct area** for each square with the following side length measurements:

	Length (m)	Area (m^2)		
a	3	12	9	6
b	7	49	28	14
c	10	40	80	100
d	9	81	36	54
e	12	36	144	92
f	20	80	200	400

3. **Complete** the following:

	Length	Breadth	Area
a	3 m	4 m	
b	9 m	7 m	
c	10 m	5 m	
d	8 cm	5 cm	
e	6 cm	11 cm	
f	4 cm	8 cm	

4. Calculate the **area** of:

a a rectangle with 6 m and 7 m sides _____

b a square with 5 m sides _____

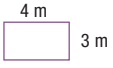
c a rectangle with 9 cm and 3 cm sides _____

d a square with 8 cm sides _____

e a rectangle with 10 cm and 7 cm sides _____

f a square with 2 cm sides _____

5. Find the **area** of:



_____

6. Circle the **correct area** for a square with a side length measurement of 6 m:

36 m^2 24 m^2 12 m^2

7. **Complete**:

Length	Breadth	Area
2 m	9 m	

8. Calculate the **area** of a rectangle with 2 m and 12 m side lengths.

_____

9. Katie's bedroom floor is 6 m by 4 m. **What size** rug does Katie need to completely cover the floor?

_____

☞ Answers on page 146

UNIT 145

See **START UPS** page 13

Area (3)

1. What is the **area** of each of the following rectangles with measurements:

   a $l = 4$ cm $b = 3$ cm _____

   b $l = 9$ cm $b = 8$ cm _____

   c $l = 10$ cm $b = 7$ cm _____

   d $l = 3$ m $b = 1$ m _____

   e $l = 6$ m $b = 5$ m _____

   f $l = 7$ m $b = 2$ m _____

2. **Complete**:

	Length	Breadth	Area
a		3 m	27 m^2
b	6 m		24 m^2
c		5 m	50 m^2
d	2 cm		4 cm^2
e		3 cm	18 cm^2
f	4 cm		16 cm^2

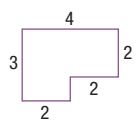
3. If the area of a shape is 24 m^2, **find the breadth** if the length is:

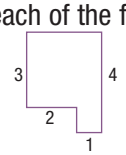
   a 24 m, $b =$ _____ b 8 m, $b =$ _____

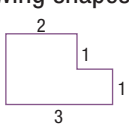
   c 6 m, $b =$ _____ d 12 m, $b =$ _____

   e 16 m, $b =$ _____ f 10 m, $b =$ _____

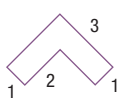
4. Find the **total area** of each of the following shapes:

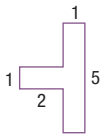
   a 

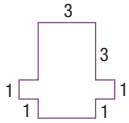
   b 

   c 

   _____ _____ _____

   d 

   e 

   f 

   _____ _____ _____

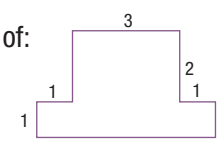
5. What is the **area** of a rectangle with measurements $l = 6$ m and $b = 3$ m? _____

6. **Complete**:

Length	Breadth	Area
5 cm		20 cm^2

7. If the area of a shape is 12 m^2, **find the breadth** if the length equals 41 m. _____

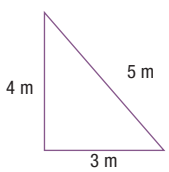
8. Find the **total area** of:



_____

9. Find the **area** of the following triangle.

   Hint: it is half of another shape!



_____

Answers on page 146

UNIT 146

See **START UPS** page 13

Area (4)

1. Write the most **appropriate unit** of measurement (cm^2 or m^2) of area for each of the following:

   a a classroom floor _____

   b a small garden bed _____

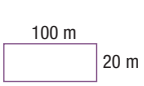
   c a book cover _____

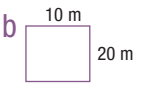
   d a football field _____

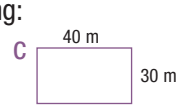
   e a photo _____

   f the top of a swimming pool _____

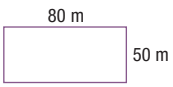
2. Find the **area** of each of the following:

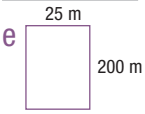
   a 

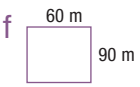
   b 

   c 

   _____ _____ _____

   d 

   e 

   f 

   _____ _____ _____

3. Find the **area** of each of the following:

   a a cow paddock 150 m × 160 m _____

   b a sheep paddock 110 m × 120 m _____

   c a horse paddock 120 m × 160 m _____

   d a wheat field 250 m × 200 m _____

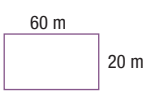
   e a cow field 200 m × 160 m _____

   f a house block 80 m × 250 m _____

4. Find the **length** of each of the following:

	Length	Breadth (m)	Area (m^2)
a		20	800
b		20	600
c		8	16 000
d		30	2 100
e		80	32 000
f		80	40 000

5. Write the most **appropriate unit** of measurement (cm^2 or m^2) of area for a table. _____

6. Find the **area** of: 

_____

7. Find the **area** of a chicken pen 10 m × 15 m.

   _____

8. Find the **length** of:

Length	Breadth (m)	Area (m^2)
	8	200

9. Find the **total area** of the farm in question 3.

   _____

UNIT 147

See **START UPS** page 13

Hectares

1. Give the **unit**, square metres (m^2) or hectares (ha), that would be used to find the area of:
   a a floor mat _____
   b a national park _____
   c a sand pit _____
   d a large beach _____
   e a kitchen _____
   f an airport _____

2. Find how many **square metres** (m^2) there are in each of the following:
   a 5 ha _____
   b 7 ha _____
   c 3 ha _____
   d 8 ha _____
   e 2 ha _____
   f 6 ha _____

3. Find how many **hectares** (ha) in each of the following:
   a 10 000 m^2 _____
   b 40 000 m^2 _____
   c 30 000 m^2 _____
   d 60 000 m^2 _____
   e 90 000 m^2 _____
   f 20 000 m^2 _____

4. Complete the number statements with **> or < or =** :
   a 100 m × 200 m ☐ 1 ha
   b 400 m × 200 m ☐ 1 ha
   c 400 m × 25 m ☐ 1 ha
   d 300 m × 20 m ☐ 1 ha
   e 350 m × 40 m ☐ 1 ha
   f 500 m × 20 m ☐ 1 ha

5. Give the **unit**, square metres (m^2) or hectares (ha), that would be used to find the area of a soccer field?
   _____

6. Find how many **square metres** there are (m^2) in 9 ha.
   _____

7. Find how many **hectares** there are (ha) in 70 000 m^2.
   _____

8. Complete the number statements with **> or < or =** :
   60 m × 200 m ☐ 1 ha

9. Find **two different rectangles** that represent fields that are exactly 1 ha in area.
   _____, _____

UNIT 148

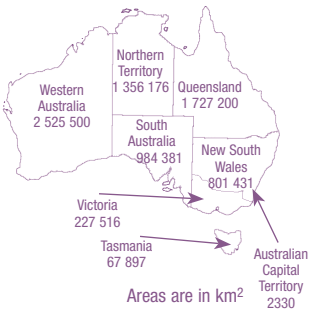
See **START UPS** page 13

Square kilometres

1. Give the **unit**, of hectares (ha) or square kilometres (km^2), that would be used to measure the area of each of the following:
   a the Great Barrier Reef _____
   b a large playground _____
   c Western Australia _____
   d Olympic Park _____
   e a large tennis court complex _____
   f a cattle station _____

2. Find how many **square kilometres** (km^2) there are in each of the following:
   a 400 ha _____ b 700 ha _____ c 300 ha _____
   d 900 ha _____ e 100 ha _____ f 500 ha _____

3. List all of the states and territories and their areas from **smallest to largest** in size:



State/Territory	Area (km^2)
a	
b	
c	
New South Wales	801 431
d	
e	
f	
Western Australia	2 525 500

4. **Convert** each of the following square kilometres (km^2) to hectares (ha):
   a 2 km^2 = _____ ha b 6 km^2 = _____ ha
   c 8 km^2 = _____ ha d 10 km^2 = _____ ha
   e 1 km^2 = _____ ha f 3 km^2 = _____ ha

5. Give the **unit**, hectares (ha) or square kilometres (km^2), that would be used to measure the area of a golf course?
   _____

6. Find how many **square kilometres** (km^2) there are in 600 ha. _____

7. Find the **total area** of Australia using the information from question 3. _____

8. **Convert** 4 km^2 to _____ ha.

9. **Which is larger**: 6500 ha or 62 km^2? _____

☞ Answers on page 146

UNIT 149

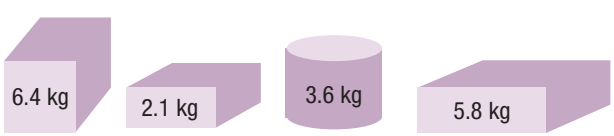
See **START UPS** page 13

Mass in g and kg (1)

1. Select the **most suitable unit** of measurement (g or kg) when finding the mass of:
   - a a brick ____
   - b a pencil ____
   - c a box of apples ____
   - d a bag of potatoes ____
   - e a CD ROM ____
   - f a piece of paper ____
2. Find **how many grams** in each of the following:
   - a 4 kg ____
   - b 7 kg ____
   - c 9 kg ____
   - d 5 kg 320 g ____
   - e 3 kg 247 g ____
   - f 8 kg 693 g ____
3. Rewrite each of the following as **kilograms and grams**:
   - a 1500 g ____
   - b 2750 g ____
   - c 6178 g ____
   - d 3850 g ____
   - e 4116 g ____
   - f 1070 g ____
4. Write each of the following masses to the **nearest 100 g**:
   - a 417 g ____
   - b 289 g ____
   - c 851 g ____
   - d 795 g ____
   - e 1233 g ____
   - f 2165 g ____
5. Select the **most suitable unit** of measurement (g or kg) when finding the mass of a large dog. ____
6. Find **how many grams** are in 3 kg 721 g.

   ____
7. Rewrite 2176 g as **kilograms and grams**.

   ____
8. Write 4163 g to the **nearest 100 g**. ____
9. Find the **total mass** of: ____



Answers on page 146

UNIT 150

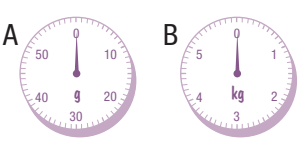
See **START UPS** page 14

Mass in g and kg (2)

1. Select the **most suitable unit** of mass (g, kg or t) when measuring the weight of:
   - a a train ____
   - b a snail ____
   - c a girl ____
   - d a calculator ____
   - e a bowling ball ____
   - f an aeroplane ____
2. Find **how many grams** are in each of the following:
   - a 6 kg ____
   - b 2 kg ____
   - c 8 kg ____
   - d 3.7 kg ____
   - e 9.1 kg ____
   - f 1.7 kg ____
3. Rewrite each of the following as **kilograms and grams**:
   - a 2176 g ____
   - b 4837 g ____
   - c 2122 g ____
   - d 8695 g ____
   - e 4035 g ____
   - f 1080 g ____
4. A cardboard box can hold a mass of 3 kg. **How many** of each of the following items could be packed into the box?
   - a  150 g ____
   - b  100 g ____
   - c  50 g ____
   - d  500 g ____
   - e  200 g ____
   - f  250 g ____
5. Select the **most suitable unit** of mass (g, kg or t) when measuring the weight of a bus. ____
6. Find **how many grams** there are in 4.6 kg.

   ____
7. Rewrite 4619 g as **kilograms and grams**.

   ____
8. A cardboard box can hold a mass of 3 kg. **How many** computer keyboards weighing 400 g could be packed into the box? ____
9. Give the **set of scales**, A or B, that would be used to weigh:
   - a a cat ____
   - b a strawberry ____



UNIT 151

See **START UPS** page 14

Mass in tonnes (1)

1. Select the **most suitable unit** (kg or t) when measuring the weight of:
   - a a dad ____
   - b a truck ____
   - c a whale ____
   - d a bag of apples ____
   - e a skateboard ____
   - f a helicopter ____
2. Write each of the following in **kilograms**:
   - a 9 t ____
   - b 5 t ____
   - c 2 t ____
   - d 17 t ____
   - e 21 t ____
   - f 60 t ____
3. Write each of the following in **tonnes**:
   - a 3000 kg ____
   - b 7000 kg ____
   - c 14 000 kg ____
   - d 10 000 kg ____
   - e 40 000 kg ____
   - f 52 000 kg ____
4. Complete each of the following with **< or >**:
   - a 12 t ☐ 11 000 kg
   - b 64 000 kg ☐ 6.5 t
   - c 700 kg ☐ 7 t
   - d 2 t ☐ 2100 kg
   - e 40 t ☐ 4200 kg
   - f 19 t ☐ 18 200 kg
5. Select the **most suitable unit** (kg or t) when measuring 5 cabbages.

   ____
6. Write 35 t in **kilograms**.

   ____
7. Write 63 000 kg in **tonnes**. ____
8. Complete the number sentence with **< or >**:

   5600 kg ☐ 50 t
9. What is the **total mass** of the packing crates?

   ____

UNIT 152

See **START UPS** page 14

Mass in tonnes (2)

1. **Complete** the following table:

	kilograms	tonnes
a	4 500	
b		3
c		2.5
d	75 000	
e	8 500	
f		16

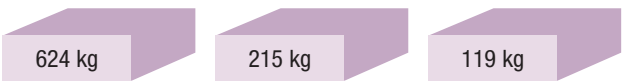
2. Order the following masses from **lightest** (a) **to heaviest** (f):
   - ____ 12 t
   - ____ 19 t
   - ____ 84 t
   - ____ 2.5 t
   - ____ 2143 t
   - ____ 52 t
3. Find how many **kilograms** in each of the following:
   - a $\frac{1}{4}$ t ____
   - b $1\frac{1}{2}$ t ____
   - c $2\frac{3}{4}$ t ____
   - d 3 t ____
   - e $4\frac{1}{4}$ t ____
   - f $3\frac{1}{2}$ t ____
4. **Convert** each of the following from tonnes to **kilograms**:
   - a 5.634 t ____
   - b 2.186 t ____
   - c 1.456 t ____
   - d 6.321 t ____
   - e 9.615 t ____
   - f 3.80 t ____
5. **Complete**:

kilograms	tonnes
	7.5

6. Order the following masses from **lightest** (a) **to heaviest** (d):
   - ____ 13 t
   - ____ 30 t
   - ____ 3.5 t
   - ____ 312 t
7. Find how many **kilograms** there are in $2\frac{1}{4}$ t.

   ____
8. **Convert** 3.708 t to **kilograms**.

   ____
9. If a shipping container can hold 1 tonne, **will the following boxes fit** in it altogether? ____



☞ Answers on pages 146–7

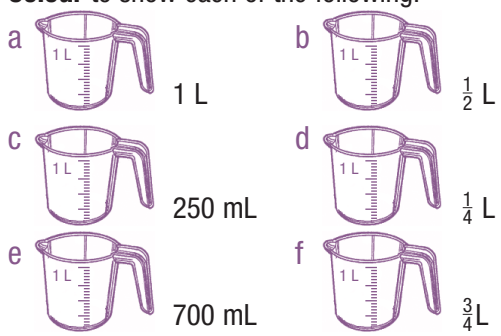
UNIT 153

See **START UPS** page 14

Capacity in mL and L (1)

1. Select the **most appropriate unit** (mL or L) when measuring the capacity of:
   - a a coffee mug ____
   - b a bucket ____
   - c a teaspoon ____
   - d a swimming pool ____
   - e a large bowl ____
   - f a medicine cup ____

2. **Colour** to show each of the following:



3. Write each of the following as **litres**:
   - a 6000 mL ____
   - b 1700 mL ____
   - c 3000 mL ____
   - d 12 000 mL ____
   - e 22 000 mL ____
   - f 36 000 mL ____

4. Write each of the following as **millilitres**:
   - a 4 L ____
   - b 7 L ____
   - c $2\frac{1}{2}$ L ____
   - d 1 L 200 mL ____
   - e 5 L 390 mL ____
   - f 27 L ____

5. Select the **most appropriate unit** (mL or L) when measuring the capacity of a large saucepan. ____

6. **Colour** to show 850 mL:

7. Write 10 000 mL as **litres**. ____

8. Write 2 L 490 mL as **millilitres**. ____

9. Find the **total amount** of:
   1 L, $\frac{1}{2}$ L, 0.2 L and 40 mL
   ____

UNIT 154

See **START UPS** page 14

Capacity in mL and L (2)

1. Order the following capacities from **least** (a) **to most** (f):
   ____ 2 L 400 mL ____ 2 L
   ____ 22 000 mL ____ 200 mL
   ____ $2\frac{1}{2}$ L ____ 2300 mL

2. Find the **total capacity** of each of the following:
   - a 200 mL + 400 mL + 300 mL ____
   - b 45 mL + 125 mL + 500 mL ____
   - c 800 mL + 200 mL + 450 mL ____
   - d 1 L + 3 L + 8 L + 2 L ____
   - e 2 L 500 mL + 3 L 450 mL ____
   - f 3 L 680 mL + 200 mL + 1 L 320 mL
     ____

3. Find **volume** that would be required to displace each of the following:
   - a 40 mL ____
   - b 65 mL ____
   - c 75 mL ____
   - d 600 mL ____
   - e 125 mL ____
   - f 790 mL ____

4. Find **how much** water would be **displaced** by each of the following:
   - a 20 cm^3 ____
   - b 90 cm^3 ____
   - c 120 cm^3 ____
   - d 310 cm^3 ____
   - e 500 cm^3 ____
   - f 850 cm^3 ____

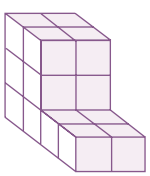
5. Order the following capacities from **least** (a) **to most** (c):
   ____ 3 L 100 mL ____ 3000 mL ____ 3.2 L

6. Find the **total capacity** of:
   1 L 375 mL + 2 L 125 mL + 3 L 250 mL
   ____

7. What **volume** would be required to displace 500 mL?
   ____

8. Find **how much** water would be **displaced** by 450 cm^3.
   ____

9. **How much** water would be displaced by the centicube model?
   ____



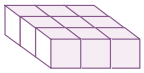
Answers on page 147

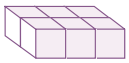
UNIT 155 See **START UPS** page 14

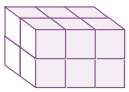
Cubic centimetres (1)

1. Find the **volume** of each of the following centicube models:

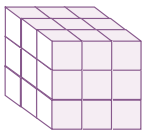
a  _____

b  _____

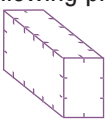
c  _____

d  _____

e  _____

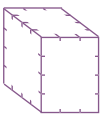
f  _____

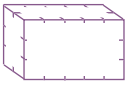
2. Draw in the cubes and find the **volume** of each of the following prisms:

a  _____

b  _____

c  _____

d  _____

e  _____

f  _____

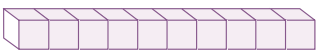
3. **Complete** the following table for each of the prisms in question 2:

	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a				
b				
c				
d				
e				
f				

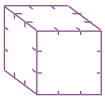
4. **Complete** the following table:

	Prism (cm)	Volume (cm^3)
a	$2 \times 2 \times 2$	
b	$1 \times 2 \times 1$	
c	$3 \times 2 \times 1$	
d	$3 \times 3 \times 2$	
e	$3 \times 3 \times 3$	
f	$4 \times 3 \times 2$	

5. Find the **volume** of the centicube model: _____



6. Draw in the cubes and find the **volume** of the model: _____



7. **Complete** for the prism in question 6:

Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)

8. **Complete**:

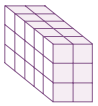
Prism (cm)	Volume (cm^3)
$4 \times 2 \times 2$	

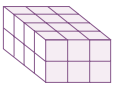
9. What are the **dimensions** of a cube with a volume of 1000 cm^3? _____

UNIT 156 See **START UPS** page 14

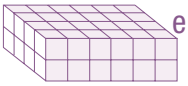
Cubic centimetres (2)

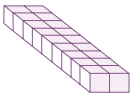
1. Find the **volume** of each centicube model:

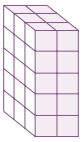
a  _____

b  _____

c  _____

d  _____

e  _____

f  _____

2. **Complete** the table for each of the prisms in question 1:

	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a				
b				
c				
d				
e				
f				

3. Find the **volume** of each of the following prisms (draw a diagram on a separate page if necessary):

a a cube with 3 cm sides _____

b a cube with 4 cm sides _____

c a cube with 5 cm sides _____

d a rectangular prism with sides 3 cm, 4 cm and 5 cm _____

e a rectangular prism with sides 2 cm, 8 cm and 10 cm _____

f a rectangular prism with sides 5 cm, 3 cm and 7 cm _____

4. Find the **capacity** in mL of a prism with each of the following volumes:

a 25 cm^3 _____ b 50 cm^3 _____

c 72 cm^3 _____ d 130 cm^3 _____

e 260 cm^3 _____ f 490 cm^3 _____

5. Find the **volume** of the centicube model: _____

6. **Complete** the table for the prism in question 5:

Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)

7. Find the **volume** of a rectangular prism with sides of 2 cm, 4 cm and 6 cm. _____

8. Find the **capacity** in mL of a prism with a volume of 900 cm^3. _____

9. **Draw** a diagram of a prism with a length of 6 cm, height of 2 cm and breadth of 4 cm.

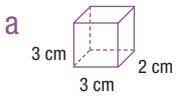
☞ Answers on page 147

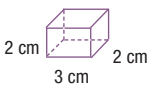
UNIT 157

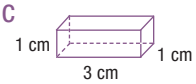
See **START UPS** page 14

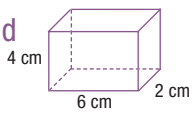
Cubic centimetres (3)

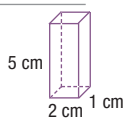
1. Calculate the **volume** for each of the following prisms:

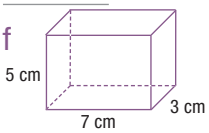
a 

b 

c 

d 

e 

f 

2. **Complete** the following table for each of the prisms in question 1:

	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a				
b				
c				
d				
e				
f				

3. Find the **volume** in cm^3 of a prism with each of the following capacities:

a 40 mL _____ b 60 mL _____

c 75 mL _____ d 100 mL _____

e 263 mL _____ f 850 mL _____

4. Find the **capacity** in mL for each of the following prisms:

a 10 cm × 6 cm × 4 cm _____

b 3 cm × 2 cm × 5 cm _____

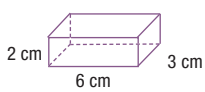
c 6 cm × 6 cm × 6 cm _____

d 8 cm × 8 cm × 5 cm _____

e 4 cm × 5 cm × 4 cm _____

f 2 cm × 5 cm × 9 cm _____

5. Calculate the **volume** of the prism:



_____

6. **Complete** the table for the prism in question 5:

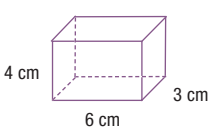
Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)

7. Find the **volume** in cm^3 of a prism with a capacity of 632 mL. _____

8. Find the **capacity** in mL for a prism 6 cm × 4 cm × 3 cm.

_____

9. Find the **capacity** of the container:



_____

☞ Answers on page 148

UNIT 158

See **START UPS** page 14

Cubic metres

1. Select the **most appropriate unit** (cm^3 or m^3) for measuring the volume of:

a a classroom _____ b a shoe box _____

c a bedroom _____ d a backpack _____

e a supermarket _____ f a desk draw _____

2. Use the **abbreviated form** to write each of the following:

a six cubic metres _____

b eight cubic metres _____

c three cubic metres _____

d eleven cubic metres _____

e nineteen cubic metres _____

f thirty cubic metres _____

3. Tick the **most appropriate unit** for measuring:

	Item	cm^3	m^3
a	a swimming pool		
b	a lunch box		
c	a match box		
d	an airport		
e	a farm shed		
f	a CD case		

4. Find the **volume** of a box:

a 1 m × 2 m × 1 m _____

b 2 m × 3 m × 1 m _____

c 2 m × 2 m × 3 m _____

d 4 m × 2 m × 1 m _____

e 5 m × 2 m × 1 m _____

f 4 m × 2 m × 3 m _____

5. Select the **most appropriate unit** (cm^3 or m^3) for measuring the volume of a DVD case.

_____

6. Use the **abbreviated form** to write twenty-five cubic metres.

_____

7. Tick the **most appropriate unit** for measuring:

Item	cm^3	m^3
a basketball stadium		

8. Find the **volume** of a box 2 m × 4 m × 4 m.

_____

9. **List four objects** that have a volume less than 1 m^3 and four objects that have a volume greater than 1 m^3.

_____

_____

UNIT 159

See **START UPS** page 14

Chance (1)

1. Two dice were thrown 25 times with the results:

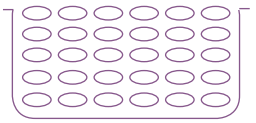
Which total was:

a most frequent? ___ b least frequent? ___

c most likely? ___ d equal to a frequency of 2? ___

e least likely? ___ f greater than 10? ___

2. Inside a bag were 30 lollies.



a **Colour** 10 red.

b **Colour** 12 yellow.

c **Colour** 8 green.

d Which colour was **most likely** to be selected? ___

e Which colour was **least likely** to be selected? ___

f Which colour was **more likely** to be selected than the red lollies? ___

3. **Mark** the words on the scale:

a unlikely b likely

c impossible d possible

e certain f even chance

4. Rate the **likelihood of the following events** on a scale of 0 (impossible) to 1 (certain):

a it will rain tomorrow ___

b I will clean my teeth today ___

c the sun will set tonight ___

d I will watch TV today ___

e there will be school holidays this year ___

f I will go overseas this year ___

5. For the results in question 1, **what numbers** had the same frequency as the total of 5? ___

6. For the lollies in question 2, what colours were **less likely** to be selected **than yellow**? ___

7. **Mark** on the scale in question 3: definite

8. Rate the **likelihood** of 'I will learn a new sport next year' on a scale as 0 (impossible) to 1 (certain). ___

9. **Draw** a bag with coloured balls that has a $\frac{1}{4}$ chance of selecting a red ball and a $\frac{2}{6}$ chance of selecting a purple ball.

UNIT 160

See **START UPS** page 14

Chance (2)

1. What is the **chance** that:

a I will play sport next week ___

b I will listen to the radio today ___

c the next person to enter the room will be female ___

d it will snow next month ___

e I will fly a helicopter next week ___

f I will be an astronaut when I grow up ___

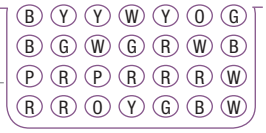
2. There are 7 different coloured balls in a box.

Give the **likelihood** of drawing each coloured ball as a fraction:

a red ___ b blue ___

c yellow ___ d orange ___

e pink ___ f green ___



3. **Describe an event** to match each of the following probabilities:

a 0.5 _____

b 0.1 _____

c 0 _____

d 1 _____

e 0.4 _____

f 0.9 _____

4. These are the possible totals for rolling two dice. Which total:

a is **most likely**?

b is **least likely**?

c has **2 chances** in 36?

d has **5 chances** in 36?

e is **greater than** 5 chances in 36?

	1	2	3	4	5	6
1	2	3	4	5	6	7
2	3	4	5	6	7	8
3	4	5	6	7	8	9
4	5	6	7	8	9	10
5	6	7	8	9	10	11
6	7	8	9	10	11	12

f is **equal to** 1 chance in 18?

5. What is the **chance** that I toss a coin and it lands on heads? ___

6. Using the information in question 2, give the **likelihood** of drawing out a white ball? ___

7. **Describe an event** with a probability of 0.3

_____

8. Using the table from question 4, what is the **chance** of a total of 4? ___

9. List all of the **different** ways to arrange these shapes, ▲ ■ ● ★, in a straight line:

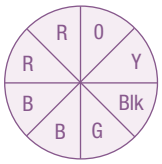
☞ Answers on page 148

UNIT 161

See **START UPS** page 14

Chance (3)

1. What is the **chance**, as a fraction, of landing on each of the following colours of the spinner?

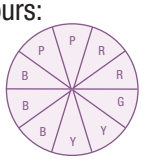


a red ____ b orange ____

c yellow ____ d green ____

e blue ____ f black ____

2. For the following spinner, **mark** the chance on the scale for each of the different colours:



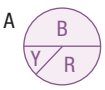
a red b green

c yellow d blue

e pink f orange

3. **True or false**?

On spinner A, the chance of landing on:



a blue is 50%. ____

b red is less than 50%. ____

c yellow is more than 25%. ____

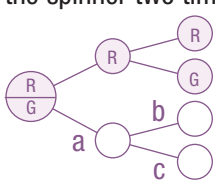
On spinner B, the chance of landing on:

d blue is 25%. ____

e yellow is more than 50%. ____

f green is the same as blue. ____

4. **Complete** the diagram for the combinations of spinning the spinner two times.



RR

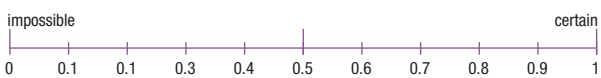
d

e

f

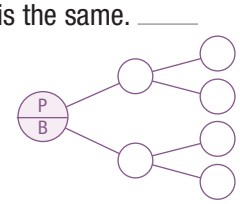
5. Find the **chance**, as a fraction, of landing on green for the spinner: ____

6. For the spinner in question 2, **mark** the chance on the scale of landing on blue or yellow.



7. **True or false**? For spinner B in question 3, the chance of landing on yellow and green is the same. ____

8. **Complete** the diagram for the combinations of spinning the spinner twice:



9. List all of the **different outcomes** for spinning the spinner three times:

UNIT 162

See **START UPS** page 14

Picture graphs (1)

1. The number of boxes packed at a factory are shown, where □ = 100 boxes. Complete the **numbers**.

Day	Boxes	Number
a Mon.	□□□▯	
b Tues.	□□□□▯	
c Wed.	□□□▯	
d Thurs.	□□□□□	
e Fri.	□□□▯	
f Sat.	□□□▯	

2. Use the information from question 1 to answer:

a **On what day** were 325 boxes packed? ____

b **Which days** had the same number of boxes packed?

____

c Were **more boxes** packed on Friday or Tuesday? ____

d **How many more** boxes were packed on Tuesday than Monday? ____

e What was the **difference** between the most and least amount of boxes packed? ____

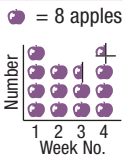
f What was the **total** number of boxes packed? ____

3. The number of boats at the docks were recorded for the week. **Complete** the picture graph using ⛵ = 4 boats:

M	
T	
W	
T	
F	
S	

Day	Number
Mon.	44
Tues.	30
Wed.	26
Thurs.	16
Fri.	10
Sat.	36

4. This is the number of apples sold at a school canteen over 4 weeks:



a Which week had the **most** sold? ____

b Which week had the **least** sold? ____

c Which week had **24 apples** sold? ____

d Find the **difference** between weeks 1 and 4? ____

e Were **more** apples sold in week 2 or 3? ____

f What was the **total** number of apples sold? ____

5. **What** does ▯ stand for in question 1? ____

6. **True or false**? There were more than 400 boxes packed on Thursday in question 1. ____

7. What was the **total** number of boats at the docks for the six days in question 3? ____

8. What was the **total** number of apples sold for the first two weeks in question 4? ____

9. **Draw a picture graph** to show the different coloured eyes in your class.

Answers on pages 148–9

UNIT 163

See **START UPS** page 14

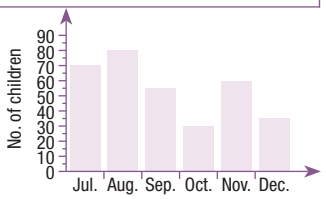
Picture graphs (2)

1. The number of children entering a fun park is recorded. Here are the results. **Complete** the picture graph for the first 6 months, using ☺ = 10 children.

Month	Number
Jan.	55
Feb.	80
March	75
April	60
May	65
June	90

Month	Number of children

2. Use the bar graph on the right to **complete** the picture graph for the next six months of the fun park above:



Month	Number of children

3. Use the tally chart to **complete** the picture graph of the number of pies sold at the school canteen.

Day	Tally
M	𝍸 |||
T	𝍸 𝍸 𝍸
W	𝍸 𝍸 ||
T	𝍸
F	𝍸 𝍸 ||||
■ = 2 pies ▼ = 1 pie	

Day	
M	
T	
W	
T	
F	

4. Use the bar graph to **complete** the picture graph:

Student	Books read
Fred	
George	
Alayna	
Erin	
Caitlin	
Hannah	

10 20 30 40 50

5. What was the **total** number of children entering the park in question 1? _____

6. What month had the **least** number of children enter the park in question 2? _____

7. What days had **more than** 12 pies sold in question 3? _____

8. What was the **total** number of books read by the boys in question 4? _____

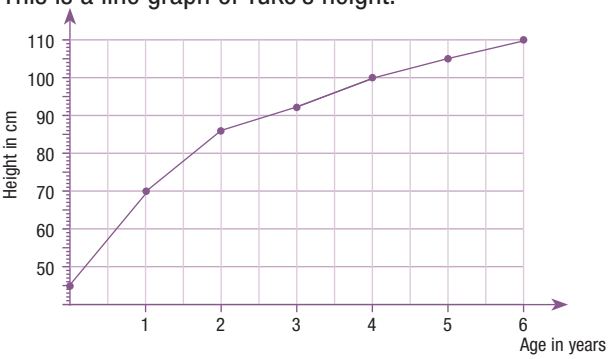
9. Create a table of the park entries for the whole year, using the information from questions 1 and 2.

UNIT 164

See **START UPS** page 15

Line graphs (1)

1. This is a line graph of Yuko's height.



Find Yuko's **height** when she was:

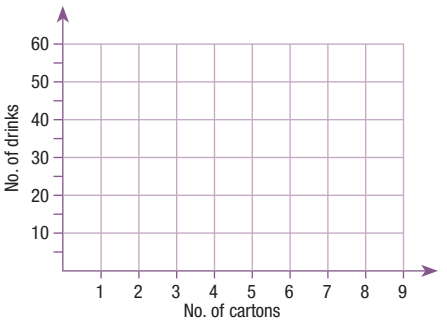
a 1 _____ b 2 _____ c 3 _____

d 5 _____ e 6 _____ f $4\frac{1}{2}$ _____

2. Complete the **table** for the number of drinks supplied by a carton of milk:

No. of cartons	1	2	3	4	5	6	7	8
No. of drinks	5	10	a	b	c	d	e	f

3. Record the information from question 2 on the **line graph**:



4. Using the information in questions 2 and 3, **find how many drinks** were supplied by:

a 6 cartons _____ b 7 cartons _____

c 9 cartons _____

Find how many cartons would be needed for:

d 40 drinks _____ e 12 drinks _____

f 28 drinks _____

5. **Find how much** Yuko grew between the ages of 5 and 6 in question 1. _____

6. Add 9 cartons to the **table** in question 2.

7. Add 9 cartons to the **line graph** in question 3.

8. **Would 4 cartons be enough** for 23 drinks in questions 2 and 3? _____

9. Using the information from questions 2 and 3, **calculate** the number of drinks that could be supplied by 15 cartons of milk. _____

☞ Answers on page 149

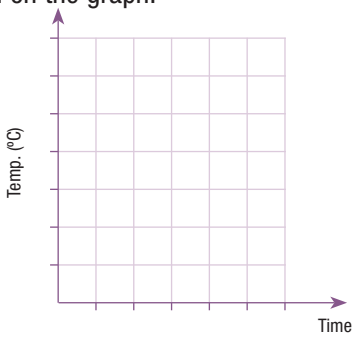
UNIT 165

See **START UPS** page 15

Line graphs (2)

1. Here are a set of temperatures collected for one afternoon. **Plot** them on the graph:

Time	Temp. (°C)
noon	20
1 pm	24
2 pm	26
3 pm	28
4 pm	32
5 pm	30



2. a At **what time** was the temperature 28°C? _____

   b At approximately **what time** was the temperature first 30°C? _____

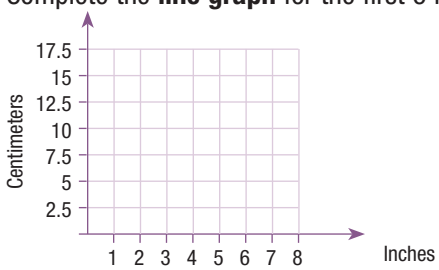
   c At approximately **what time** was the temperature first 25°C? _____

   Find the **approximate temperature** at:

   d 2:30 pm? _____ e 4:30 pm? _____

   f 12:30 pm? _____

3. We can change a measurement from inches to centimetres using 1 inch = 2.5 cm (approximately). Complete the **line graph** for the first 6 inches:



4. Convert to **centimetres**:

   a 6 inches _____

   b 4 inches _____

   c 3 inches _____

   Convert to **inches**:

   d 10 cm _____

   e 12.5 cm _____

   f 5 cm _____

5. **Plot** the temperature of 27°C at 6 pm on your graph in question 1.
6. What was the **difference** between the temperature at noon and at 4 pm in question 1? _____
7. Add the value for 7 inches on your **graph** in question 3.
8. Convert 15 cm to **inches**. _____
9. Devise a **conversion graph** between hours and minutes.

UNIT 166

See **START UPS** page 15

Tally marks

1. Use **tally marks** to show the count of fruit eaten:

   a 23 apples b 18 bananas c 14 oranges

   d 6 peaches e 19 pears f 11 cherries

Fruit	Tally
apples	
bananas	
oranges	
peaches	
pears	
cherries	

2. Complete the **numbers** for the tally chart of cars:

Day	Tally	Number
Monday	𝍸 𝍸 ||	
Tuesday	𝍸 𝍸 𝍸 |	
Wednesday	𝍸 ||||	
Thursday	𝍸 𝍸 |||	
Friday	𝍸 𝍸 𝍸	
Saturday	𝍸 𝍸 |||	

3. **Find how many cars** were parked on:

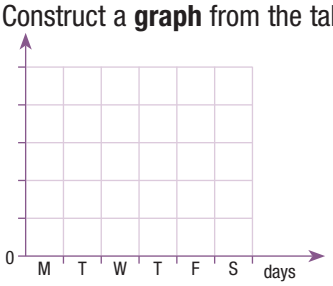
   a Monday _____ b Tuesday _____

   c Wednesday _____ d Friday and Saturday _____

   e Monday to Friday _____

   f Wednesday and Thursday _____

4. Construct a **graph** from the tally sheet in question 2.



5. Using the information from question 1, how many fruit were counted **altogether**? _____
6. What was the **total number** of cars parked for the week in question 2? _____
7. If 17 cars were parked on Sunday, **how many cars** were now parked for the week in question 2?

   _____

8. Including Sunday, what was the **total number** of cars parked on the weekend? _____
9. Create a **tally chart** for the number of people playing different sports in your family/class.

☞ Answers on pages 149–50

UNIT 167

See **START UPS** page 15

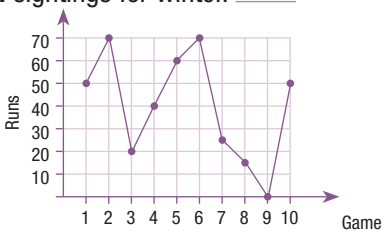
Reading graphs

1. A tally of the number of whale sightings at Jervis Bay was kept:

Month	Tally
June	𝍸 𝍸 |
July	𝍸 𝍸
August	𝍸 𝍸 𝍸 |
September	𝍸 |||

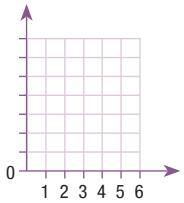
   a What was the **number** for June? ____
   b What was the **number** for September? ____
   c **Which month** had 10 sightings? ____
   d **Which month** had 16 sightings? ____
   e What was the **difference** between sightings in August and September? ____
   f Find the **total** sightings for winter. ____

2. The runs of a cricket player for a season is shown on the graph.

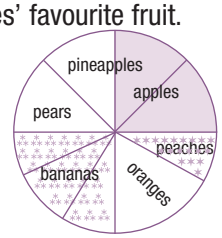


   a What was the **highest** number of runs? ____
   b What was the **lowest** number of runs? ____
   c **How many times** were there 50 or more runs? ____
   d In **which game** was the number of runs 25? ____
   e In **which game** was the number of runs 60? ____
   f What was the **number of runs** of the last game of the season? ____

3. Use the information in question 2 to create a **column graph** of the first 6 games.



4. Here is the breakdown of 64 peoples' favourite fruit. **Find how many people** selected:



   a pears ____ b apples ____
   c bananas ____ d oranges ____
   e Which was the **most popular** fruit? ____
   f **Which fruit** had a popularity of 8 people? ____

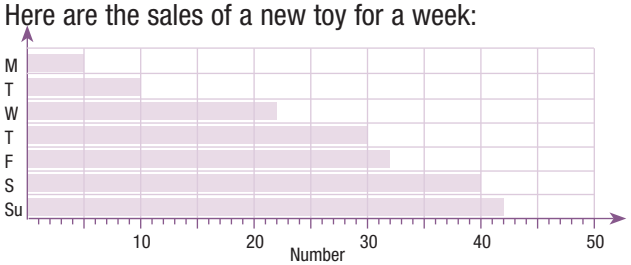
5. **Which month** in question 1 had the greatest number of whale sightings? ____
6. What was the **total** number of runs scored in the first five games of the season in question 2? ____
7. In which game was the **least** number of runs scored in the column graph of question 3? ____
8. What was the **total popularity** of apples and bananas in question 4? ____
9. Use the information from question 4 to create a **bar graph**.

UNIT 168

See **START UPS** page 15

Column graphs (1)

1. Here are the sales of a new toy for a week:

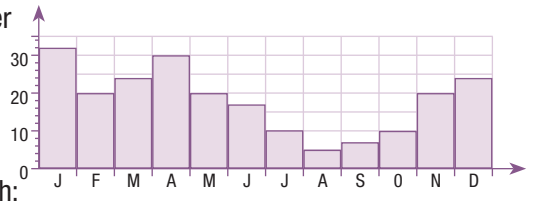


   a What was the **number** sold on Wednesday? ____
   b What was the **number** sold on Friday? ____
   c **What days** had sales more than 35? ____
   d **What days** had sales less than 15? ____
   e Find the **number** sold on the weekend? ____
   f Find the **number** sold Monday to Wednesday? ____

2. Create a **tally table** of the information from question 1:

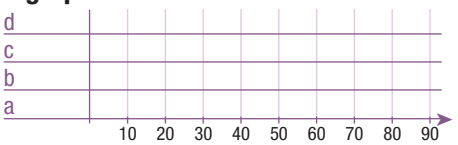
Day	Tally
M	
T	
W	
T	
F	
S	
S	

3. The number of hats sold at a surf shop are shown in the graph:



   a Which month had the **most hat** sales? ____
   b Which month had the **least hat** sales? ____
   c **How many** hats were sold in November? ____
   d **Which months** had 10 hat sales? ____
   e **How many** hats were sold in spring? ____
   f **How many** hats were sold in summer? ____

4. Create a **column graph** of the hat sales in the different seasons from the question 3 data:



5. Find the **total number** of toys sold in question 1? ____
6. In question 1, **how many more** toys were sold on Saturday than Thursday? ____
7. **Which months** had less than 10 hat sales in question 3? ____
8. **Which season** had the least number of hats sold in question 4? ____
9. In question 1, **why** would more toys be sold on the weekend than weekdays? ____

☞ Answers on page 150

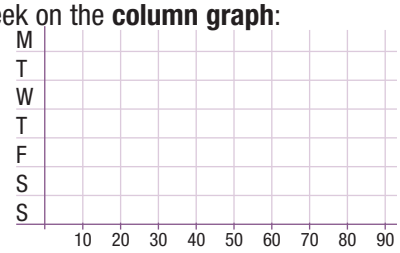
UNIT 169

See **START UPS** page 15

Column graphs (2)

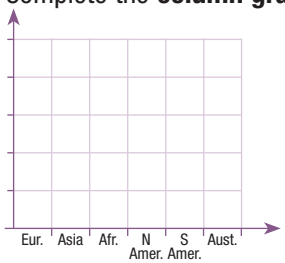
1. Show the information of how far Anton rode his bike during a training week on the **column graph**:

Monday 45 km
Tuesday 82 km
Wednesday 50 km
Thursday 70 km
Friday 25 km
Saturday 30 km



2. a What was the **furthest distance** Anton rode? _____
   b What was the **shortest distance** Anton rode? _____
   c What was the **difference** between the furthest and shortest **distances**? _____
   d On **which** day(s) did Anton ride over 50 km? _____
   e Find the **distance** he rode Monday–Wednesday? _____
   f Find the **distance** he rode Thursday–Saturday? _____

3. 1500 people were surveyed about their holiday destination and the results are shown.
   Complete the **column graph**:



Country	Number
Europe	254
Asia	425
Africa	115
North America	237
South America	93
Australia	350

4. a **How many** people travelled to America? _____
   b What was the **most popular** destination? _____
   c Did **more or less** people travel to North America than Europe? _____
   d Did **more** people travel to Australia than Asia? _____
   e What were the **total** number of people travelling to Asia and Africa? _____
   f What was the **difference** between the most popular and least popular destination? _____

5. Add Anton's riding distance of 67 km for Sunday to the **graph** in question 1.

6. What was the **total** distance Anton rode for the week? _____

7. Add a title to the **graph** in question 3. _____

8. If some people said they had never been on holiday, use the information in question 3 to find out **how many** people this is. _____

9. Draw a **line graph** of Anton's riding distances.

UNIT 170

See **START UPS** page 15

Surveys and collecting data (1)

1. Here are some maths words:

survey	column	axis	picture
tally	data	graph	line
chance	marks	reading	collecting
plot	construct	total	

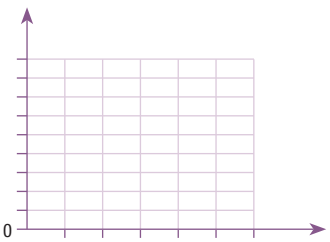
Complete the **tally chart** of the use of letters:

a 𝍸 𝍸 ||||	b –	c 𝍸 𝍸 |||	d ||	e	f –	g |||
h ||	i	j –	k	l	m ||	n
o 𝍸 𝍸	p |||	q –	r 𝍸 𝍸 |	s ||||	t 𝍸 𝍸 ||||	u
v |	w –	x |	y ||	z –		

2. Complete the **counts** of letter use:

a 9	b –	c 8	d 2	e	f –	g 3
h 2	i	j –	k	l	m 2	n
o 5	p 3	q –	r 6	s 4	t 9	u
v 1	w –	x 1	y 2	z –		

3. Create a **bar graph** of the use of the vowels and t:



4. **Which letter(s)** is/are:
   a used the most? ___ b used the least? ___
   c not used at all? ___ d used exactly 5 times? ___
   e used 5–10 times? ___
   f used 1–5 times? ___

5. What **method** was used to display the information in question 1? _____

6. What was the **total** number of letters used? _____

7. Give a **title** for the graph. _____

8. What was the **total** number of vowels used? ___

9. **Complete** from the information in question 2:

No. of times letter used	Tally	Number
0		
1		
2		
3		
4		
5		
6		
7		
8		
9		

Answers on pages 150–1

UNIT 171

See **START UPS** page 15

Surveys and collecting data (2)

1. A six-sided die was rolled 30 times, and the following information collected on the number rolled:

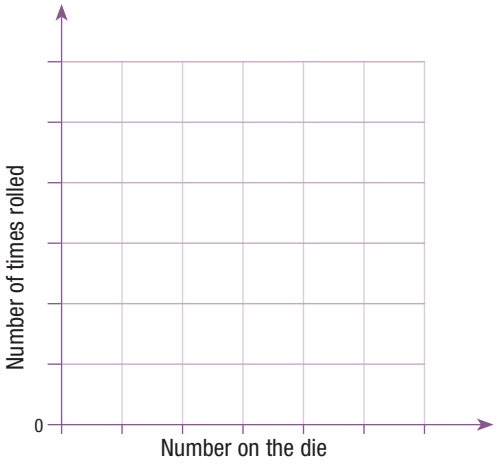
   1, 3, 5, 2, 4, 1, 3, 5, 6, 6, 6, 5, 4, 3, 2,
   2, 1, 3, 2, 1, 4, 3, 6, 5, 2, 6, 6, 2, 5, 3

   Complete each **tally** in the table:

Number	1	2	3	4	5	6
Tally	a	b	c	d	e	f
Count	a	b	c	d	e	f

2. Complete the **count** for each number in the table above.

3. Draw a **column graph** of the information in questions 1 and 2:



4. Write **six questions** that could be asked about the data in questions 1, 2 and 3:

   a _____

   b _____

   c _____

   d _____

   e _____

   f _____

5. Draw the **tally marks** which represent the number 9.

   _____

6. **How many times** were the numbers 1, 2 and 3 rolled in question 1? _____

7. **What number** was rolled 4 times? _____

8. **Write a question** that could be asked about the numbers on the die.

   _____

9. **Collect survey data** about the number of plants in a garden, dividing them into appropriate groups.

UNIT 172

See **START UPS** page 15

Mean

1. Find the **mean** of each of the following sets of scores:

   a 2, 4, 6, 8, 10 _____

   b 14, 21, 15, 19, 21 _____

   c 4, 7, 8, 5 _____

   d 16, 27, 32, 21 _____

   e 30, 35, 34, 32, 31, 33 _____

   f 45, 50, 43, 52, 54, 47 _____

2. Here is a collection of marks for students in their quick quizzes for the term. Find each student's **mean score**:

	Student	Scores	Mean
a	Bob	7, 9, 8, 6, 5, 7, 6, 7, 9, 10	
b	Yuko	6, 7, 9, 5, 4, 8, 8, 4, 7, 8	
c	Ho	8, 9, 8, 9, 10, 9, 10, 8, 8, 9	
d	Fred	6, 5, 7, 8, 8, 7, 9, 8, 6, 10	
e	Gillian	10, 9, 10, 8, 7, 9, 8, 9, 7, 8	
f	Kathy	5, 6, 8, 3, 7, 5, 6, 7, 8, 6	

3. Find the **mean** of each of the following:

   a 13, 20, 15 _____

   b 10, 20, 15 _____

   c 12, 10, 14 _____

   d 8, 12, 10, 14 _____

   e 5, 10, 13, 20 _____

   f 15, 10, 20, 15 _____

4. Find the **mean cost** of:

   a $3, $7, $8, $2 _____

   b $1, $3, $5, $3 _____

   c $20, $5, $3, $4 _____

   d $13, $17, $27, $15 _____

   e 35c, 40c, 5c, 20c _____

   f 5c, 10c, 20c, 5c _____

5. Find the **mean** of 2, 3, 4, 5, 6.

   _____

6. Find the **mean score** for Georgio:

   7, 2, 8, 5, 7, 6, 3, 9, 8, 7

   _____

7. Find the **mean** of 0, 3, 5, 20.

   _____

8. Find the **mean cost** of $24, $30, $36.

   _____

9. Find **three numbers** that will add together to give a mean of 6.

   _____

☞ Answers on page 151

UNIT 173

See **START UPS** page 15

Problem solving (1)

1. **Find the number** that:
   - a when doubled and 9 is added, the answer is 23 ____
   - b when halved and 6 is subtracted, the answer is 5 ____
   - c when multiplied by 5 and 2 is added, the answer is 32 ____
   - d when 7 is added and then divided by 3, the answer is 11 ____
   - e when 9 is subtracted and is multiplied by 8, the answer is 80 ____
   - f when multiplied by 7 then divided by 3, the answer is 21 ____

2. Find the **value** of the △ in each of the following:
   - a △ + 7 = 20 – 6 ____
   - b 5 × △ = 27 + 8 ____
   - c 100 ÷ △ = 21 – 16 ____
   - d 63 ÷ 9 = 17 – △ ____
   - e 83 – 47 = △ ÷ 2 ____
   - f 6 × 3 = 45 – △ ____

3. Find the **value** of the □ in each of the following:
   - a □ + $\frac{1}{4}$ = 2
   - b 3 – □ = $1\frac{1}{2}$
   - c $\frac{6}{10}$ – □ = $\frac{1}{10}$
   - d □ – $1\frac{1}{8}$ = $2\frac{3}{8}$
   - e 4 – □ = $2\frac{7}{10}$
   - f $\frac{4}{8}$ + □ = $3\frac{6}{8}$

4. Use the number line to find the **numbers** which are:

   - a two units from the number 5? ____
   - b five units from the number 3? ____
   - c one unit from the number 10? ____
   - d less than 4 units from the number 4? ____
   - e more than 2 units, but less than 5 units from the number 8? ____
   - f more than 1 unit, but less than 3 units from the number 7? ____

5. **Find the number** that, when doubled and 6 is subtracted, the answer is 42. ____

6. Find the **value** of the △ in: 21 – 15 = △ × 2

7. Find the **value** of the □ in: 5 +1 = 2 × □

8. **Which numbers** are three units from the number 10?

9. **Write** your own 'find the number' (like in question 1) using at least one multiplication and division step.

Answers on page 151

UNIT 174

See **START UPS** page 15

Problem solving (2)

1. Without using the same digit twice, find **how many different 2-digit numbers** can be made using:
   - a 3, 4 ____
   - b 1, 2, 3 ____
   - c 3, 4, 5 ____
   - d 7, 8, 9 ____
   - e 2, 3, 4, 5 ____
   - f 6, 7, 8, 9 ____

2. Cubes are placed end to end in a straight line. Find **how many faces** are visible from any view if there is/are:

   - a 1 cube ____
   - b 2 cubes ____
   - c 3 cubes ____
   - d 5 cubes ____
   - e 10 cubes ____
   - f 50 cubes ____

3. For each difference **find two numbers** that have the given product:
   - a difference = 6, product = 567, numbers: ____
   - b difference = 5, product = 500, numbers: ____
   - c difference = 10, product = 24, numbers: ____
   - d difference = 7, product = 408, numbers:
   - e difference = 1, product = 132, numbers: ____
   - f difference = 9, product = 220, numbers: ____

4. Find the **value** of the * in each of the following:
   - a * × 2 = 8.6 ____
   - b * ÷ 5 = 2.4 ____
   - c * + 4.81 = 10.46 ____
   - d 5 ÷ * = 1.25 ____
   - e 7.25 – * = 5.47 ____
   - f 6 × * = 25.2 ____

5. Without using the same digit twice, in any number, **how many different 2-digit numbers** can be made using 2, 7, 6, 3? ____

6. If 100 cubes are placed end to end in a straight line, **how many faces** are visible? ____

7. **Find two numbers** that have a product of 180 and a difference of 3. ____

8. Find the **value** of the * in: * + 6.12 = 12.05 ____

9. Complete the **magic square** for 34:

1			4
	6		
	10	11	
13		2	

UNIT 175

See **START UPS** page 15

Problem solving (3)

1. Matches are used to form triangles in a line, as shown:

Find **how many matches** would be needed to form:

a 3 triangles _____ b 4 triangles _____

c 5 triangles _____ d 10 triangles _____

e 15 triangles _____ f 50 triangles _____

2. **Complete**:

a multiply 3.2 by 15 _____

b square 14 and subtract 50 _____

c multiply 72 by 7.5 _____

d square 19 and divide by 10 _____

e divide 194 by 13 _____

f multiply 2.5 by 70 and add 17 _____

3. a A school fete raised $329, $527 and $452 from three different stalls. How much was raised **altogether**? _____

b Was the **total more or less** than $1000? _____

c By **how much**? _____

d If the school needed to raise $2000, **how much more** did they need? _____

e A fun run was held and 30 students raised $20 each. How much was raised **altogether**? _____

f **Did** the stalls and the fun run raise the $2000? _____

4. Using intervals, **how many** can be joined together in each of the following?

a  _____

b  _____

c  _____

d  _____

e  _____

f  _____

5. Find **how many matches** would be needed to form 100 triangles in a line as in question 1? _____

6. **Divide** 200 by 7. _____

7. **How much** more money did the principal need to add to make the $2000 in question 3? _____

8. **How many** intervals can be drawn for 10 dots?

_____

9. Here is part of a receipt from the school fete. What was the total cost of the items? _____

What was the GST component? _____

book	$16.99
pens	$6.95
food	$12.95
	$36.89
Total includes GST of $2.62	

UNIT 176

See **START UPS** page 15

Problem solving (4)

1. Matches are used to form squares in a line, as shown:

Find **how many matches** are needed to form:

a 3 squares _____ b 4 squares _____

c 5 squares _____ d 10 squares _____

e 20 squares _____ f 60 squares _____

2. For each difference, **find the two numbers** that have the product:

	Difference	Product	
a	65	750	
b	58	1863	
c	15	1134	
d	13	8330	
e	63	3700	
f	64	3366	

3. A bricklayer lays 172 bricks each hour. Find **how many** bricks are laid in:

a 2 hours _____

b 4 hours _____

c 10 hours _____

Find **how long** does it take to lay:

d 1032 bricks _____

e 1462 bricks _____

f 2580 bricks _____

4. Find **how many** 3-digit numbers can be made from the following if each digit may be used only once:

a 2, 4, 7 _____ b 3, 7, 6 _____

c 1, 7, 5, 2 _____ d 1, 4, 2, 3 _____

e 1, 2, 3, 4 _____ f 1, 9, 3, 8, 6 _____

5. **How many matches** are needed to form 85 squares, arranged as in question 1? _____

6. For the difference of 11, **find the two numbers** that give the product 476. _____

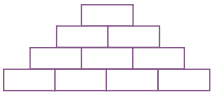
7. Find **how much** does it cost to lay 500 bricks if the bricklayer is paid $80 per hour in question 3.

_____

8. Find **how many** 2-digit numbers can be made from 7 and 3 if each digit may only be used once.

_____

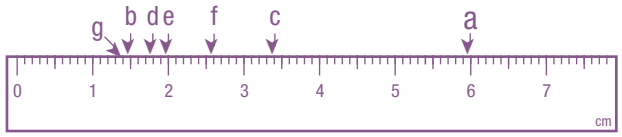
9. Find the **pattern** and calculate the **number of bricks** in the tenth row. _____



☞ Answers on page 151

ANSWERS: Units 135 – 142

Unit 135 Page 84

1 

2 a 9.2 cm b 4.1 cm c 3.8 cm d 9.5 cm e 10.9 cm f 15.3 cm 3 a 17 mm b 22 mm c 87 mm d 41 mm e 126 mm f 157 mm 4 a mm b m c cm d m e cm f m 5 see question 1 6 12.5 cm 7 33 mm 8 km 9 13 cm

Unit 136 Page 84

1 a mm b km c m d cm e m f cm 2 a 16 mm b 24 mm c 9 mm d 12 mm e 27 mm f 31 mm 3 a 90 mm b 210 mm c 43 mm d 75 mm e 16 mm f 930 mm 4 a 7.2 cm b 1.6 cm c 5 cm d 4.8 cm e 19.2 cm f 36.5 cm 5 m 6 48 mm 7 1020 mm 8 12.7 cm 9 l = 42 mm, b = 16 mm, P = 116 mm or 11.6 cm

Unit 137 Page 85

1 b, d, e 2 a 4000 m b 6000 m c 1000 m d 9000 m e 11 000 m f 15 000 m 3 a 9 km b 3 km c 5 km d 2 km e 12 km f 17 km 4 a 60 km/h b 40 km/h c 100 km/h d 100 km/h e 80 km/h f 110 km/h 5 no 6 7000 m 7 10 km 8 60 km/h 9 various

Unit 138 Page 85

1 a m b km c m d cm e m f km 2 a 4 km b 11 km c 7 km d 23 km e 5 km f 20 km 3 a 6000 m b 9000 m c 14 000 m d 8000 m e 3000 m f 2000 m 4 a 2.5 km b 3.64 km c 1.09 km d 3.58 km e 2.905 km f 4.756 km 5 km 6 18 km 7 12 000 m 8 2.385 km 9 a 9610 m b 4318 m c 6045 m

Unit 139 Page 86

1 a m b km c mm d cm e km f mm 2 a 21 mm, 2.1 cm b 46 mm, 4.6 cm c 16 mm, 1.6 cm d 9 mm, 0.9 cm e 36 mm, 3.6 cm f 25 mm, 2.5 cm 3 a 8.37 m b 1.49 m c 3.98 m d 9.15 m e 10.24 m f 11.79 m 4 a 370 b 2.2 c 850 d 2.49 e 3.2 f 650 5 cm 6 27 mm, 2.7 cm 7 8.56 m 8 320 9 a trundle wheel b ruler c tape measure

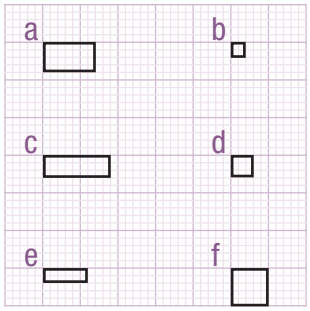
Unit 140 Page 86

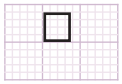
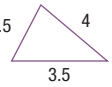
1 a 2 cm, 1.5 cm b 1.5 cm, 1 cm c 2.5 cm, 1 cm d 2.2 cm, 1 cm e 2.7 cm, 2.1 cm f 1.8 cm, 1.4 cm 2 a 7 cm b 5 cm c 7 cm d 6.4 cm e 9.6 cm f 6.4 cm 3 a 8 m b 48 m c 40 m d 12.8 cm e 21.2 cm f 32.4 cm 4 a 12 m b 30 m c 26 cm d 14.6 cm e 12.8 cm f 8 m 5 2.1 cm, 1.2 cm 6 6.6 cm 7 28 m 8 25.8 m 9 47 m

Unit 141 Page 87

1 a 22 cm b 34 m c 10 m d 34 m e 32 cm f 22 cm 2 a 22 cm b 24 cm c 40 cm d 70 m e 70 m f 140 m 3 a 16 cm b 20 cm c 40 cm d 36 m e 80 m f 60 m 4 a 0.6 cm b 1.8 cm c 1.1 cm d 0.9 cm e 0.5 cm f 0.9 cm 5 20 m 6 28 m 7 10 cm 8 5.8 cm 9 3.2 cm + 1.8 cm + 1.3 cm = 6.3 cm

Unit 142 Page 87

1 a 12 cm b 12 cm c 25 cm d 12 cm e 12 cm f 8 cm 2 

3 a 22 mm b 8 mm c 24 mm d 12 mm e 16 mm f 20 mm 4 a 12.8 m b 8 cm c 18 cm d 57.4 m e 7.5 cm f 6 cm 5 18 cm 6  7 16 mm 8 17.6 cm 9 e.g. 

ANSWERS: Units 143 – 151

Unit 143 Page 88

1 a 12 b 6 c 3 d 9 e 8 f 2 2 a 16 mm, 4 mm b 6 mm, 5 mm c 15 mm, 3 mm d 7 mm, 2 mm e 25 mm, 3 mm f 18 mm, 3 mm 3 a 64 mm^2 b 30 mm^2 c 45 mm^2 d 14 mm^2 e 75 mm^2 f 54 mm^2 4 a 12 cm^2 b 40 cm^2 c 54 cm^2 d 28 m^2 e 60 m^2 f 56 m^2 5 6 6 12 mm, 7 mm 7 84 mm^2 8 27 m^2 9 P = 90 m and A = 450 m^2

Unit 144 Page 88

1 a 8 m^2 b 9 m^2 c 100 m^2 d 42 m^2 e 24 m^2 f 35 m^2 2 a 9 m^2 b 49 m^2 c 100 m^2 d 81 m^2 e 144 m^2 f 400 m^2 3 a 12 m^2 b 63 m^2 c 50 m^2 d 40 cm^2 e 66 cm^2 f 32 cm^2 4 a 42 m^2 b 25 m^2 c 27 cm^2 d 64 cm^2 e 70 cm^2 f 4 cm^2 5 12 m^2 6 36 m^2 7 18 m^2 8 24 m^2 9 24 m^2

Unit 145 Page 89

1 a 12 cm^2 b 72 cm^2 c 70 cm^2 d 3 m^2 e 30 m^2 f 14 m^2 2 a 9 m b 4 m c 10 m d 2 cm e 6 cm f 4 cm 3 a 1 m b 3 m c 4 m d 2 m e 1.5 m f 2.4 m 4 a 4 + 6, 10 square units b 6 + 4, 10 square units c 2 + 3, 5 square units d 2 + 3, 5 square units e 2 + 5, 7 square units f 1 + 1 + 9 + 3 + 3, 17 square units 5 18 m^2 6 4 cm 7 3 m 8 1 + 1 + 6 + 3, 11 square units 9 6 m^2 ($\frac{1}{2}$ of a rectangle)

Unit 146 Page 89

1 a m^2 b m^2 c cm^2 d m^2 e cm^2 f m^2 2 a 2000 m^2 b 200 m^2 c 1200 m^2 d 4000 m^2 e 5000 m^2 f 5400 m^2 3 a 24 000 m^2 b 13 200 m^2 c 19 200 m^2 d 50 000 m^2 e 32 000 m^2 f 20 000 m^2 4 a 40 m b 30 m c 2000 m d 70 m e 400 m f 500 m 5 cm^2 6 1200 m^2 7 150 m^2 8 25 m 9 total area found by adding all areas together, i.e. 24 000 m^2 + 13 200 m^2 … = 158 400 m^2

Unit 147 Page 90

1 a m^2 b ha c m^2 d ha e m^2 f ha 2 a 50 000 m^2 b 70 000 m^2 c 30 000 m^2 d 80 000 m^2 e 20 000 m^2 f 60 000 m^2 3 a 1 ha b 4 ha c 3 ha d 6 ha e 9 ha f 2 ha 4 a > b > c = d < e > f = 5 m^2 6 90 000 m^2 7 7 ha 8 > 9 various

Unit 148 Page 90

1 a km^2 b ha c km^2 d ha e ha f km^2 2 a 4 km^2 b 7 km^2 c 3 km^2 d 9 km^2 e 1 km^2 f 5 km^2

3

	State/Territory	Area (km^2)
a	ACT	2 330
b	Tasmania	67 897
c	Victoria	227 516
	New South Wales	801 431
d	South Australia	984 381
e	Northern Territory	1 356 176
f	Queensland	1 727 200
	Western Australia	2 525 500

4 a 200 b 600 c 800 d 1000 e 100 f 300 5 ha 6 6 km^2 7 7 692 431 km^2 8 400 9 6500 ha

Unit 149 Page 91

1 a kg b g c kg d kg e g f g 2 a 4000 g b 7000 g c 9000 g d 5320 g e 3247 g f 8693 g 3 a 1 kg 500 g b 2 kg 750 g c 6 kg 178 g d 3 kg 850 g e 4 kg 116 g f 1 kg 70 g 4 a 400 g b 300 g c 900 g d 800 g e 1200 g f 2200 g 5 kg 6 3721 g 7 2 kg 176 g 8 4200 g 9 6.4 + 2.1 + 3.6 + 5.8 = 17.9, 17.9 kg

Unit 150 Page 91

1 a t b g c kg d g e kg f t 2 a 6000 g b 2000 g c 8000 g d 3700 g e 9100 g f 1700 g 3 a 2 kg 176 g b 4 kg 837 g c 2 kg 122 g d 8 kg 695 g e 4 kg 35 g f 1 kg 80 g 4 a 20 b 30 c 60 d 6 e 15 f 12 5 t 6 4600 g 7 4 kg 619 g 8 7.5, really 7 keyboards, as can't have half a keyboard 9 a B b A

Unit 151 Page 92

1 a kg b t c t d kg e kg f t 2 a 9000 kg b 5000 kg c 2000 kg d 17 000 kg e 21 000 kg f 60 000 kg 3 a 3 t b 7 t c 14 t d 10 t e 40 t f 52 t 4 a > b > c < d < e > f > 5 kg 6 35 000 kg 7 63 t 8 < 9 3.2 + 4.1 + 6.7, 14 t

ANSWERS: Units 152 – 156

Unit 152 Page 92

1 a 4.5 b 3000 c 2500 d 75 e 8.5 f 16 000 2 a 2.5 t b 12 t c 19 t d 52 t e 84 t f 2143 t 3 a 250 kg b 1500 kg c 2750 kg d 3000 kg e 4250 kg f 3500 kg 4 a 5634 kg b 2186 kg c 1456 kg d 6321 kg e 9615 kg f 3800 kg 5 7500 6 a 3.5 t b 13 t c 30 t d 312 t 7 2250 kg 8 3708 kg 9 624 + 215 + 119, 958 kg, yes they will fit

Unit 153 Page 93

1 a mL b L c mL d L e L f mL 2 a  b  c  d  e  f 

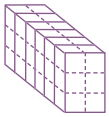
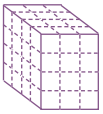
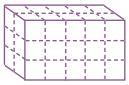
3 a 6 L b 1.7 L c 3 L d 12 L e 22 L f 36 L 4 a 4000 mL b 7000 mL c 2500 mL d 1200 mL e 5390 mL f 27 000 mL 5 L 6  7 10 L 8 2490 mL 9 1 + 0.5 + 0.2 + 0.04 = 17.4, 17.4 L or 1740 mL

Unit 154 Page 93

1 a 200 mL b 2 L c 2300 mL d 2 L 400 mL e $2\frac{1}{2}$ L f 22 000 mL 2 a 900 mL b 670 mL c 1450 mL (1.45 L) d 14 L e 5 L 950 mL f 5 L 200 mL (5.2 L) 3 a 40 cm^3 b 65 cm^3 c 75 cm^3 d 600 cm^3 e 125 cm^3 f 790 cm^3 4 a 20 mL b 90 mL c 120 mL d 310 mL e 500 mL f 850 mL 5 a 3000 mL b 3 L 100 mL c 3.2 L 6 6 L 750 mL 7 500 cm^3 8 450 mL 9 16 mL

Unit 155 Page 94

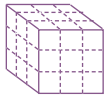
1 a 3 cm^3 b 9 cm^3 c 6 cm^3 d 12 cm^3 e 5 cm^3 f 27 cm^3

2 a 36 cm^3  b 16 cm^3  c 6 cm^3  d 48 cm^3  e 30 cm^3  f 8 cm^3 

3

	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a	6	2	3	36
b	4	2	2	16
c	3	2	1	6
d	4	3	4	48
e	5	2	3	30
f	2	2	2	8

4 a 8 b 2 c 6 d 18 e 27 f 24 5 10 cm^3

6 27 cm^3 

7

Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
3	3	3	27

8 16 9 10 cm × 10 cm × 10 cm

Unit 156 Page 94

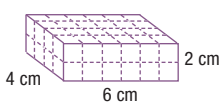
1 a 30 cm^3 b 24 cm^3 c 6 cm^3 d 48 cm^3 e 18 cm^3 f 30 cm^3 2

	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a	5	2	3	30
b	4	3	2	24
c	2	1	3	6
d	6	4	2	48
e	9	2	1	18
f	3	2	5	30

3 a 27 cm^3 b 64 cm^3 c 125 cm^3 d 60 cm^3 e 160 cm^3 f 105 cm^3 4 a 25 mL b 50 mL c 72 mL d 130 mL e 260 mL f 490 mL 5 24 cm^3 6

Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
3	2	4	24

7 48 cm^3 8 900 mL

9 

ANSWERS: Units 157 – 161

Unit 157 Page 95

1 a 18 cm^3 b 12 cm^3 c 3 cm^3 d 48 cm^3 e 10 cm^3 f 105 cm^3 2

	Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
a	3	2	3	18
b	3	2	2	12
c	3	1	1	3
d	6	2	4	48
e	2	1	5	10
f	7	3	5	105

3 a 40 cm^3 b 60 cm^3 c 75 cm^3 d 100 cm^3 e 263 cm^3 f 850 cm^3 4 a 240 mL b 30 mL c 216 mL d 320 mL e 80 mL f 90 mL 5 36 cm^3 6

Length (cm)	Breadth (cm)	Height (cm)	Volume (cm^3)
6	3	2	36

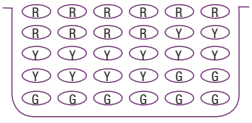
7 632 cm^3 8 72 mL 9 72 cm^3

Unit 158 Page 95

1 a m^3 b cm^3 c m^3 d cm^3 e m^3 f cm^3 2 a 6 m^3 b 8 m^3 c 3 m^3 d 11 m^3 e 19 m^3 f 30 m^3 3 a m^3 b cm^3 c cm^3 d m^3 e m^3 f cm^3 4 a 2 m^3 b 6 m^3 c 12 m^3 d 8 m^3 e 10 m^3 f 24 m^3 5 cm^3 6 25 m^3 7 m^3 8 32 m^3
9 various, e.g. a loaf of bread is less than 1 m^3, a big fridge is greater than 1 m^3.

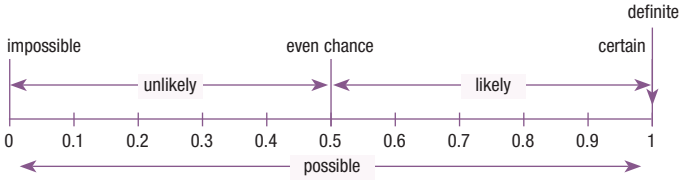
Unit 159 Page 96

1 a 7 b 2 and 12 c 7 d 3, 4, 9, 10 and 11 e 2 and 12 f 11 and 12 2



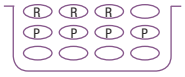
d yellow e green f yellow

3



4 a 0.2 b 1 c 1 d 0.8 e 1 f 0.2 5 6 and 8

6 green and red 7 see answer to question 3 8 0.5 9

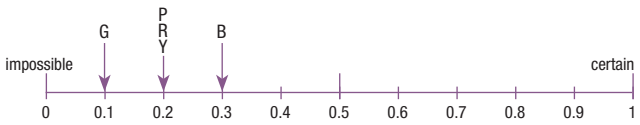


Unit 160 Page 96

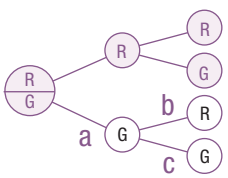
1 various 2 a $\frac{7}{28} = \frac{1}{4}$ b $\frac{4}{28} = \frac{1}{7}$ c $\frac{4}{28} = \frac{1}{7}$ d $\frac{2}{28} = \frac{1}{14}$ e $\frac{2}{28} = \frac{1}{14}$ f $\frac{4}{28} = \frac{1}{7}$ 3 various 4 a 7 b 2 and 12
c 3 and 11 d 6 and 8 e 7 f 3 and 11 5 even chance 6 $\frac{5}{28}$ 7 various 8 $\frac{3}{36} = \frac{1}{12}$ 9 There are 24 different ways.

Unit 161 Page 97

1 a $\frac{1}{4}$ b $\frac{1}{8}$ c $\frac{1}{8}$ d $\frac{1}{8}$ e $\frac{1}{4}$ f $\frac{1}{8}$ 2

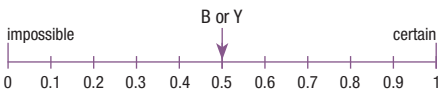


3 a true b true c false d true e false f true 4

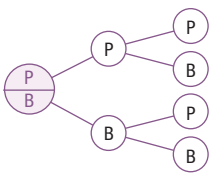


RR
d RG
e GR
f GG

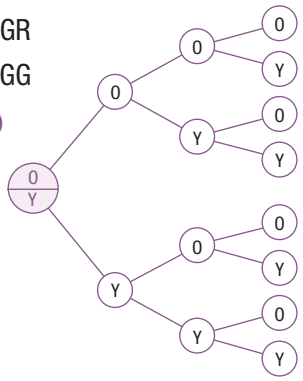
5 $\frac{1}{4}$ 6



7 false 8



9



ANSWERS: Units 162 – 165

Unit 162 Page 97

1 a 350 b 450 c 325 d 500 e 350 f 375 2 a Wednesday b Monday and Friday c Tuesday d 100 e 175 f 2350

3

M	⛵⛵⛵⛵⛵⛵⛵⛵⛵⛵
T	⛵⛵⛵⛵⛵⛵⛵◢
W	⛵⛵⛵⛵⛵⛵◢
T	⛵⛵⛵⛵
F	⛵⛵◢
S	⛵⛵⛵⛵⛵⛵⛵⛵⛵

4 a week 1 b week 3 c week 2 d 6 apples e week 2 f 102 apples 5 50 boxes 6 true 7 162 boats 8 56 apples 9 various

Unit 163 Page 98

1

Month	Number of children
January	☺☺☺☺☺☾
February	☺☺☺☺☺☺☺☺
March	☺☺☺☺☺☺☺☾
April	☺☺☺☺☺☺
May	☺☺☺☺☺☺☾
June	☺☺☺☺☺☺☺☺☺

☺ = 10 children

2

Month	Number of children
July	☺☺☺☺☺☺☺
August	☺☺☺☺☺☺☺☺
September	☺☺☺☺☺☾
October	☺☺☺
November	☺☺☺☺☺☺
December	☺☺☺☾

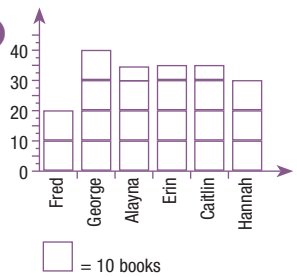
☺ = 10 children

3

Day	Pies sold
M	■■■■
T	■■■■■■■▲
W	■■■■■■
T	■■▲
F	■■■■■■■

■ = 2 pies ▲ = 1 pie

4



5 425 6 October 7 Tuesday and Friday 8 60 books

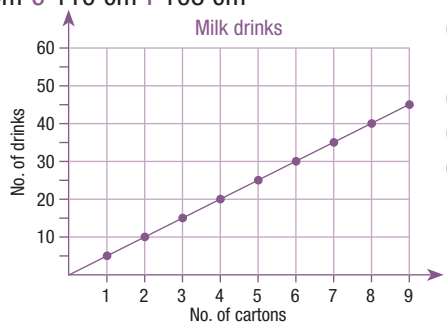
9

Month	Number	Month	Number
January	55	July	70
February	80	August	80
March	75	September	55
April	60	October	30
May	65	November	60
June	90	December	35

Unit 164 Page 98

1 a 70 cm b 86 cm c 92 cm d 105 cm e 110 cm f 103 cm

2 a 15 b 20 c 25 d 30 e 35 f 40 3



4 a 30 drinks b 35 drinks c 45 drinks d 8 cartons e 3 cartons f 6 cartons

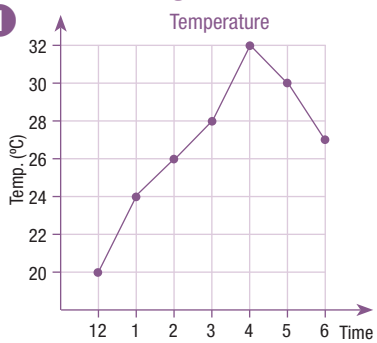
5 5 cm 6 9 cartons, 45 drinks

7 see answer to question 3 8 no

9 75 drinks

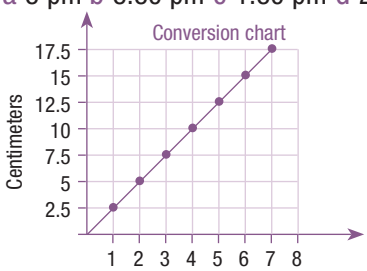
Unit 165 Page 100

1

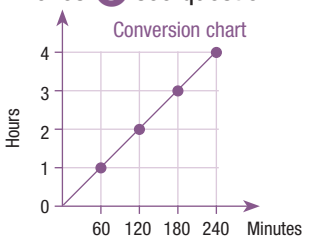


2 a 3 pm b 3:30 pm c 1:30 pm d 27°C e 31°C f 22°C

3



4 a 15 cm b 10 cm c 7.5 cm d 4 inches e 5 inches f 2 inches 5 see question 1



6 12°C 7 see answer to question 3 8 6 inches 9

ANSWERS: Units 166 – 169

Unit 166 Page 99

1

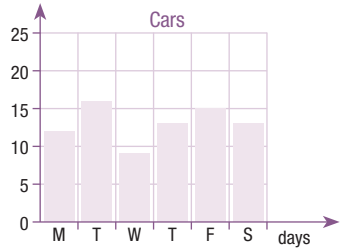
Fruit	Tally
apples	𝍸 𝍸 𝍸 𝍸 |||
bananas	𝍸 𝍸 𝍸 |||
oranges	𝍸 𝍸 ||||
peaches	𝍸 |
pears	𝍸 𝍸 𝍸 ||||
cherries	𝍸 𝍸 |

5 91 6 78 7 95 8 30 9 various

2 a 12 b 16 c 9 d 13 e 15 f 13

3 a 12 b 16 c 9 d 28 e 65 f 22

4

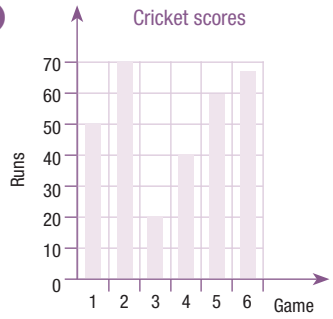


Unit 167 Page 100

1 a 11 b 8 c July d August e 8 f 37

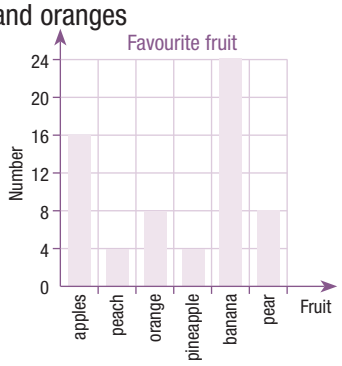
2 a 70 b 0 c 5 d 7 e 5 f 50

3



4 a 8 b 16 c 24 d 8 e bananas f pears and oranges

5 August 6 240 7 3 8 40 people 9



Unit 168 Page 100

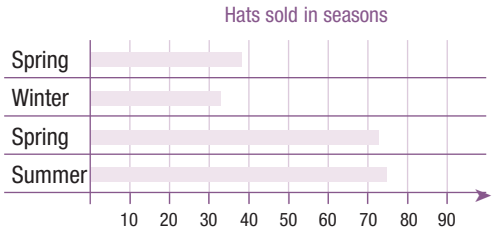
1 a 22 b 32 c Saturday and Sunday d Monday and Tuesday e 82 f 37

2

Day	Tally
M	𝍸
T	𝍸 𝍸
W	𝍸 𝍸 𝍸 𝍸 ||
T	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
F	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||
S	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸
S	𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 𝍸 ||

3 a January b August c 20 d July and October e 7 + 10 + 20, 37 hats f 23 + 32 + 20, 75 hats

4



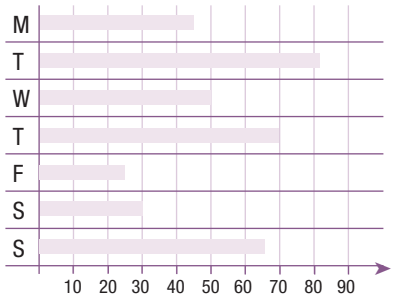
5 5 + 10 + 22 + 30 + 32 + 40 + 42 = 181, 181 toys

6 10 toys 7 August and September

8 winter 9 more children in the shop

Unit 169 Page 101

1



2 a 82 km b 25 km c 57 km d Tuesday and Thursday e 177 km f 125 km

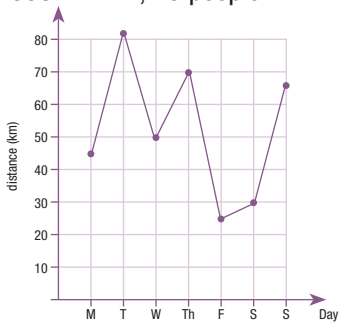
3

4 a 330 b Asia c less d less e 540 f 332 5 see answer to question 1

6 369 km 7 Holiday destinations

8 1500 – 1474, 26 people

9



ANSWERS: Units 170 – 176

Unit 170 Page 101

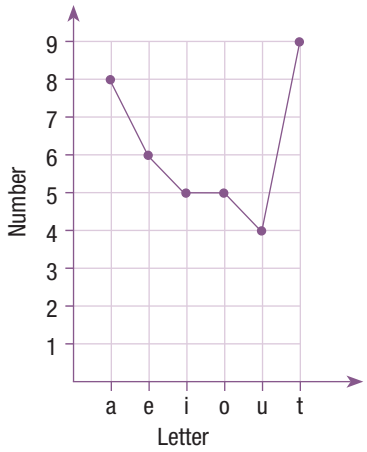
1

a 𝍸 ||||	b –	c 𝍸 |||	d ||	e 𝍸 |	f –	g |||
h ||	i 𝍸	j –	k |	l 𝍸 |||	m |	n 𝍸 |
o 𝍸	p |||	q –	r 𝍸 |	s ||||	t 𝍸 ||||	u ||||
v |	w –	x |	y ||	z –		

2

a 9	b –	c 8	d 2	e 6	f –	g 3
h 2	i 5	j –	k 1	l 8	m 2	n 6
o 5	p 3	q –	r 6	s 4	t 9	u 4
v 1	w –	x 1	y 2	z –		

3



4 a a and t b k, v and x c b, f, j, q, w and z d i and o e a, c, e, i, l, n, o, r and t f d, g, h, i, k, m, o, p, s, u, v, x and y **5** tally **6** 20 letters 87 times **7** Use of letters **8** 9 + 6 + 5 + 5 + 4 = 29 **9**

No. of times letter used	Tally	Total
0	𝍸 |	6
1	|||	3
2	||||	4
3	||	2
4	||	2
5	||	2
6	|||	3
7		0
8	||	2
9	||	2

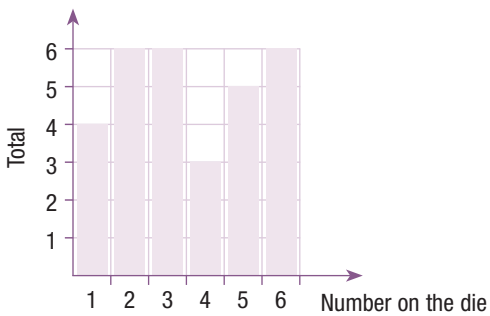
Unit 171 Page 102

1 and **2**

Number	1	2	3	4	5	6
Tally	a ||||	b 𝍸 |	c 𝍸 |	d |||	e 𝍸	f 𝍸 |
Count	a 4	b 6	c 6	d 3	e 5	f 6

4 various **5** 𝍸 \|\|\|\| **6** 16 **7** 1 **8** various **9** various

3



Unit 172 Page 102

1 a 6 b 18 c 6 d 24 e 32.5 f 48.5 **2** a 7.4 b 6.6 c 8.8 d 7.4 e 8.5 f 6.1 **3** a 16 b 15 c 12 d 11 e 12 f 15
4 a $5 b $3 c $8 d $18 e 25c f 10c **5** 4 **6** 6.2 **7** 7 **8** $30 **9** various, e.g. 5, 6, 7

Unit 173 Page 103

1 a 7 b 22 c 6 d 26 e 19 f 9 **2** a 7 b 7 c 20 d 10 e 72 f 27 **3** a $1\frac{3}{4}$ b $1\frac{1}{2}$ c $\frac{5}{10} = \frac{1}{2}$ d $3\frac{4}{8} = 3\frac{1}{2}$ e $1\frac{3}{10}$ f $3\frac{2}{8} = 3\frac{1}{4}$
4 a 3, 7 b –2, 8 c 9, 11 d 1, 2, 3, 5, 6, 7 e 4, 5, 11, 12 f 5, 9 **5** 24 **6** 3 **7** 3 **8** 7, 13 **9** various

Unit 174 Page 103

1 a 2 b 6 c 6 d 6 e 12 f 12 **2** a 6 b 10 c 14 d 22 e 42 f 202 **3** a 27 and 21 b 20 and 25 c 2 and 12 d 24 and 17 e 11 and 12 f 11 and 20 **4** a 4.3 b 12 c 5.65 d 4 e 1.78 f 4.2 **5** 12 **6** 402 **7** 15 and 12 **8** 5.93 **9** 34:

1	15	14	4
12	6	7	9
8	10	11	5
13	3	2	16

Unit 175 Page 104

1 a 7 b 9 c 11 d 21 e 31 f 101 **2** a 48 b 146 c 540 d 36.1 e 14.92 f 192 **3** a $1308 b more c $308 d $692 e $600 f no **4** a 3 b 6 c 10 d 15 e 21 f 28 **5** 201 **6** 28.57 **7** $92 **8** 45 **9** $36.89, $2.62

Unit 176 Page 104

1 a 10 b 13 c 16 d 31 e 61 f 181 **2** a 75 and 10 b 23 and 81 c 27 and 42 d 98 and 85 e 37 and 100 f 99 and 34 **3** a 344 b 688 c 1720 d 6 hours e $8\frac{1}{2}$ hours f 15 hours **4** a 6 b 6 c 24 d 24 e 24 f 120 **5** 256 **6** 17 and 28 **7** $232.56 **8** 2 **9** 10