

AUSTRALIAN
Signpost
MATHS



STAGE 1

1

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AUSTRALIAN Signpost

MATHS

NSW

SAMPLE PAGE

EARLY
STAGE 1

1

Maths is fun with
Australian Signpost
Maths NSW.



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What is Australian Signpost Maths NSW?

Australian Signpost Maths NSW is a mathematics program providing direction and support for teaching and learning. The series covers the content and skills presented in the NSW Mathematics Syllabus K–6, 2022.

A Student Book and an online Teacher Resource are provided for Kindergarten (Early Stage 1).

For Years 1 to 6 (Stages 1–3), a Student Book, an online Teacher Resource and a Mentals Book are provided for each year level. The online Teacher Resources provide a wealth of support for teachers.

The content has been carefully sequenced within each year level and across the K–6 series to take into account students' expected mathematical development. However, from the rich and varied material provided, teachers can develop individual learning programs to meet the needs of each student.

The Student Books are designed to support explicit teaching methods. Many group activities are provided in Activity, Investigation and Fun spots within the Student Books and the online Teacher Resource.

To maximise the benefits of the program, the Student Book, the online Teacher Resource and the Mentals Book should be used together.



Student Books

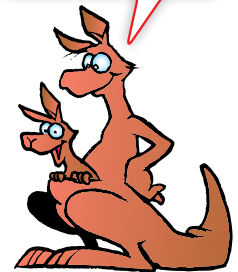


Mentals Books



Teacher Resource

This is Australian Signpost Maths New South Wales.



Structure of Australian Signpost Maths NSW

In the K–2 books, the worksheet pages covering all three strands are presented in a recommended order. Each unit of 4 pages usually begins with Number and algebra. The Contents cross-reference allows teachers to quickly find the pages where each concept has been covered.

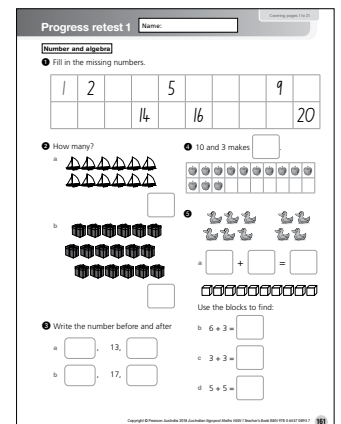
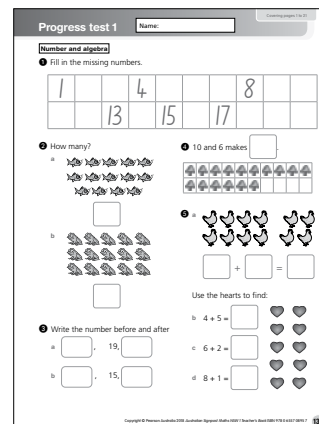
Within the program, explicit teaching, working mathematically skills, language development and identification and treatment of weaknesses are given high priority.

Identifying and addressing areas of need

Five progress tests are designed to identify each student's areas of need, and the follow-up program after each of the tests is designed to address these needs. A reference to the relevant worksheet page is given for each test question. A remediation record page is used to track the student's progress.

These testing resources can be found in the online Teacher Resource.

Parallel progress retests are provided for further testing after remediation has taken place. See pages 131 and 132 of this book for more information.



Special features of Australian Signpost Maths NSW

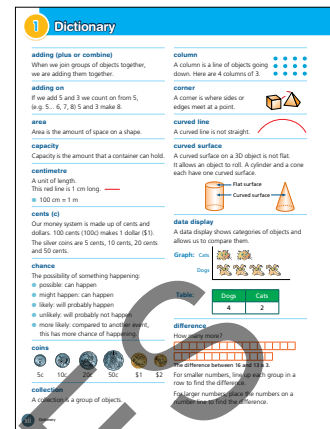
● The traffic light icons

These are found on the top right of each worksheet page in the Student Books. They allow students to assess their own progress and give feedback to the teacher.

- **Green:** I found this work easy.
- **Orange:** I found some work on the page difficult.
- **Red:** I don't understand the work on this page.

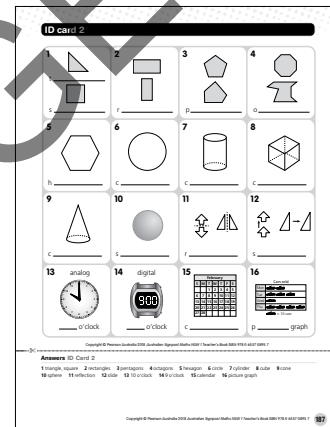
● Dictionary

Terms used in the Student Book and terms that should be understood at this level are recorded here to provide a reference for students and teachers. This is found on pages xii–xvi of this book and in the online Teacher Resource.



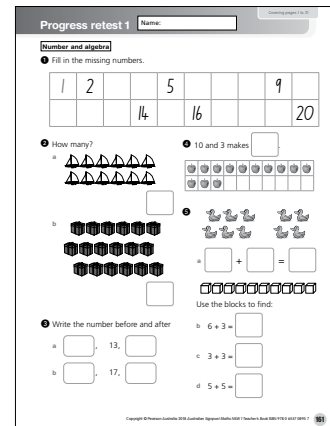
● ID cards (Years 1 to 6)

These cards review the language of Mathematics by asking students to identify common terms, shapes and symbols. They are designed to be reused and are found in the online Teacher Resource and in the front of the Mentals Books.



● Progress tests

These allow the teacher to identify each student's strengths and needs. Cross-references for each question direct teachers and students to the pages where that work is introduced. Tables are provided to record the follow-up that takes place and parallel tests are provided for retesting. These tests can be found in the online Teacher Resource.



● Year 1 Consolidation Booklet

This 30 page booklet is found in the online Teacher Resource. It is designed to reinforce work completed in class and provides practice of important skills and addition and subtraction facts. The booklet can be used when there is limited supervision or when a student finishes classwork early.

● Answers

These are supplied in the online Teacher Resource.

● Blackline Masters (BLM)

References are made to the Blackline Masters in the teaching suggestions provided for each student work page.

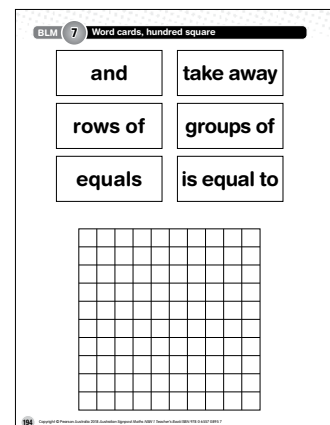
● Differentiation

Each student work page has a Teacher Resource page to support it. Cross-references direct the teacher to pages where the concept is introduced and developed. These references may be from the Student Book for the previous year, current year or the next year.

The Teacher Resource support pages provide additional learning activities for students who need remediation or extension activities. The Blackline Masters provide activities to support students of various learning abilities.

● Cartoons

Cartoons are used to motivate and instruct.



Australian Signpost Maths NSW icons

Signpost icons are used throughout the book as cues to the essential nature of exercises and activities, and as a guide to ways of engaging with them. These icons often indicate alternative or more concrete approaches to dealing with concepts.



This icon highlights **important rules and concepts** occurring throughout the book. It often appears with worked examples.



Investigations allow students to **explore and discover** maths concepts.



Activities provide **applications and enrichment**. These activities usually involve the use of concrete materials and partner or group work.



These enjoyable activities are used to **motivate and involve** students in mathematical pursuits. They usually involve games and puzzles.

Structure of New South Wales Mathematics K–6

The NSW Mathematics Syllabus content is presented in three strands.

- 1 Number and algebra
- 2 Measurement and space
- 3 Statistics and probability

Working mathematically pervades each of these strands.

The Mathematics Syllabus can be found at:

<https://curriculum.nsw.edu.au/learning-areas/mathematics/mathematics-k-10>

Textbook Structure

Within the Contents for Year 1, we show related pages using these categories:

Number and algebra

Numbers
Addition / subtraction
Sharing / grouping
Patterns

Measurement and space

2D shapes / 3D objects
Length / area / mass
Capacity / volume
Time / duration
Position

Statistics and probability

Data displays / chance

1

Contents and syllabus overview

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 Dictionaryxii
 Identifying and addressing areas of need . . . 131
 Blackline masters 133



KEY

Number and algebra
Measurement and space
Statistics and probability

Strand	Number / algebra	Measurement / space	Statistics / probability	Content area	Numbers	Addition / subtraction	Sharing / grouping	Patterns	2D shapes / 3D objects	Length / area / mass	Capacity / volume	Time / duration	Position	Data displays / chance
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Page	Unit	Title	Working mathematically pervades each of the strands.											
1	Thinking Skills													
2	1A	Number revision												
3	1B	Number revision												
4	1C	Numbers to 20												
5	1D	Shapes and patterns												
6	2A	Adding two groups												
7	2B	Addition sentences												
8	2C	Combinations up to 10												
9	2D	Identifying objects												
10	3A	Numbers 11 to 20												
11	3B	Numbers to 20												
12	3C	Analog time												
13	3D	Digital and analog time												
14	4A	Numbers to 20												
15	4B	Friends of 10												
16	4C	Position language												
17	4D	Position language												
18	5A	Addition facts												
19	5B	Partitioning												
20	5C	Half past												
21	5D	Half past												

Progress Test 1: Administer test (Teacher Resource, pages 135–137) then address weaknesses.

22	6A	Groups of 10												
23	6B	Counting by tens												
24	6C	Counting by tens												
25	6D	Data displays												
26	7A	Subtraction												
27	7B	Subtraction												
28	7C	3D objects												
29	7D	Objects in our world												

KEY

Number and algebra
Measurement and space
Statistics and probability

Page	Unit	Title	Strand	Content area			Numbers	Addition / subtraction	Sharing / grouping	Patterns	2D shapes / 3D objects	Length / area / mass	Capacity / volume	Time / duration	Position	Data displays / chance
				Number / algebra	Measurement / space	Statistics / probability										
30	8A	Odd and even numbers														
31	8B	Addition to 20														
32	8C	Units of length														
33	8D	Informal units of length														
34	9A	Counting on														
35	9B	Counting on														
36	9C	Analog and digital time														
37	9D	Digital and analog time														
38	10A	Addition to 20														
39	10B	Larger numbers														
40	10C	Informal units of length														
41	10D	Measuring length														
42	11A	Numbers to 100														
43	11B	Subtraction to 20														
44	11C	Comparing capacities														
45	11D	Informal units of capacity														
46	12A	Addition sentences														
47	12B	Addition														

Progress Test 2: Administer test (Teacher Resource, pages 139–142) then address weaknesses.

48	12C	Addition by counting on														
49	12D	Comparing capacities														
50	13A	Numbers to 120														
51	13B	Numbers to 120														
52	13C	The hexagon														
53	13D	Picture graphs														
54	14A	Subtraction														
55	14B	Subtraction														
56	14C	Comparing the mass of objects														
57	14D	Mass														
58	15A	Counting back														
59	15B	Counting back														
60	15C	Subtraction														
61	15D	Data displays														
62	16A	Doubles														
63	16B	Doubling and near doubling														
64	16C	Months of the year														
65	16D	Months and seasons														

KEY

Number and algebra
Measurement and space
Statistics and probability

Page	Unit	Title	Strand	Number / algebra	Measurement / space	Statistics / probability	Content area	Numbers	Addition / subtraction	Sharing / grouping	Patterns	2D shapes / 3D objects	Length / area / mass	Capacity / volume	Time / duration	Position	Data displays / chance
66	17A	Patterns		●							●						
67	17B	Combinations for numbers		●					●								
68	17C	Object hunt			●							●					
69	17D	Recognising 3D objects			●							●					
70	18A	Difference		●					●								
71	18B	Difference between groups		●					●								
72	18C	The pentagon and octagon			●							●					
73	18D	Comparing areas			●							●					
74	19A	Place value		●				●									
75	19B	Numbers to 120		●				●									
76	19C	Place value		●				●									
77	19D	Finding the nearest ten		●				●									
78	20A	Subtraction by counting on							●								
79	20B	Number relationships							●								
80	20C	Numbers to 100						●									
81	20D	Chance words				●											●
82	21A	Equal groups		●						●							
83	21B	Using groups		●						●							

Progress Test 3: Administer test (Teacher Resource, pages 144–147) then address weaknesses.

84	21C	Informal units of volume			●									●			
85	21D	Comparing volume			●									●			
86	22A	Numbers to 120		●				●									
87	22B	Skip counting patterns		●						●							
88	22C	Volume			●								●				
89	22D	Halves and quarters			●							●					
90	23A	Equal groups		●					●								
91	23B	Using groups		●					●								
92	23C	Halves and quarters			●							●					
93	23D	Symmetry			●							●					
94	24A	Skip counting		●						●							
95	24B	Number patterns		●						●							
96	24C	Months of the year			●										●		
97	24D	Gather and display data				●											●
98	25A	Number patterns		●						●							
99	25B	Counting by 2s, 5s and 10s		●						●							
100	25C	2D shapes			●							●					
101	25D	Properties of shapes			●							●					

KEY

Number and algebra
Measurement and space
Statistics and probability

Page	Unit	Title	Strand	Number / algebra	Measurement / 00space	Statistics / probability	Content area	Numbers	Addition / subtraction	Sharing / grouping	Patterns	2D shapes / 3D objects	Length / area / mass	Capacity / volume	Time / duration	Position	Data displays / chance
102	26A	Half of a group		●						●							
103	26B	Halves		●						●							
104	26C	Calendar			●										●		
105	26D	The calendar			●										●		
106	27A	Sharing		●						●							
107	27B	Sharing		●						●							
108	27C	The cube			●							●					

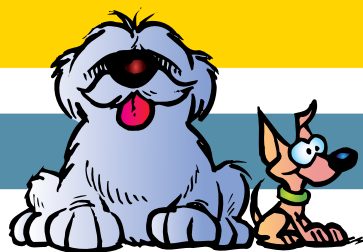
Progress Test 4: Administer test (Teacher Resource, pages 149–152) then address weaknesses.

109	27D	Giving directions			●												
110	28A	Grouping to share		●						●							
111	28B	How many groups?		●						●							
112	28C	Comparing areas			●								●				
113	28D	Area using units			●								●				
114	29A	Looking for tens		●					●								
115	29B	Relating addition and subtraction		●					●								
116	29C	Relating addition and subtraction		●					●								
117	29D	Comparing mass			●								●				
118	30A	Bridging to 10		●					●								
119	30B	Bridging to 10s		●					●								
120	30C	Using coins in a data display				●											●
121	30D	Reflecting a shape			●							●					
122	31A	Bridging to 10s		●					●								
123	31B	Sliding a shape			●							●					
124	31C	Counting back		●					●								
125	31D	Left and right			●											●	
126	32A	Using partitioning		●					●								
127	32B	Using partitioning to add		●					●								
128	32C	Chance				●											●

Progress Test 5: Administer test (Teacher Resource, pages 154–157) then address weaknesses.

129	32D	Following directions			●											●	
130	33A	Gather and organise data				●											●
131	Identifying and addressing areas of need																
133	BLMs 1 Number lines/charts		2 Number bond houses														
135	3 Number bonds (addition)		4 Addition and subtraction facts														

Contents cross-reference



Number and algebra

1	Representing whole numbers	Pages
	Counting	2, 3, 4, 10, 11, 14, 50, 51, 75, 77, 80, 86
	Using tens	22, 23, 24, 42, 51, 74, 75, 76, 77, 80, 114, 118
	State the number after (one more) or before (one less)	23, 76, 80, 86
	Counting backwards from a given number	58, 59
	Skip counting	24, 50, 66, 80, 87, 94, 95, 98, 99
	Place value in larger numbers	39, 42, 74, 75, 76
	Number lines (and number tracks)	2, 3, 39, 46, 47, 51, 54, 55, 59, 60, 77, 78, 95, 98, 118, 120
2	Combining and separating quantities	Pages
	Addition	6, 7, 8, 15, 18, 19, 31, 34, 35, 38, 46, 47, 48, 62, 63, 67, 78, 79, 114, 115, 116, 118, 119, 122, 124
	Subtraction	26, 27, 43, 54, 55, 58, 59, 60, 70, 71, 78, 115, 116, 124
	Difference	70, 71
	Strategies	62, 63, 114, 118, 119, 122, 124, 126, 127
	Part-whole relationships up to 10, friends of 10	8, 15, 19
	Number bonds	7, 8, 15, 18, 19, 67, 115, 116, 118, 119, 124, 135
	Relationships with number sentences	78, 79, 115, 116
3	Forming groups	Pages
	Equal groups (multiplication)	82, 83, 90, 91, 110, 111
	Sharing (division)	83, 102, 103, 106, 107, 110, 111
	Patterns	5, 30, 66, 87, 95, 98, 99
	Number houses	8, 19, 67, 134

Measurement and space

1	Geometric measure	Pages
	Position: Describing position	16, 17, 109, 125
	Giving and following directions	109, 125, 129
	Ordinal numbers	39, 75, 99, 105
	Left and right	16, 17, 125
	Length: Describing and comparing lengths	32, 33, 40, 41, 89, 92
	Using units of length	40, 41
	Halves and quarters	89, 92, 102, 103
2	Two-dimensional spatial structure	Pages
	2D shapes: Sorting, describing and making shapes	5, 52, 72, 100, 101
	Circle, triangle, square, rectangle, quadrilateral, hexagon, pentagon, octagon	5, 52, 72, 100, 101
	Symmetry, reflecting, sliding	93, 121, 123
	Area: Describing and comparing areas	73, 112, 113
3	Three-dimensional spatial structure	Pages
	3D objects: Describing and sorting 3D objects	9, 28, 29, 68, 69, 108
	Volume: Describing and comparing volumes	84, 85, 88, 108
	Comparing internal volumes (capacity)	44, 45, 49
	Stacking, packing and building to compare volumes	88, 108
4	Non-spatial measure	Pages
	Mass: Describing and comparing the weight of objects	56, 57, 117
	Time: Describing, comparing, sequencing time, calendar	12, 21, 36, 104, 105
	Months and seasons	64, 65, 96, 104, 105
	Telling time on the hour and half-hour using analog and digital clocks	12, 13, 20, 21, 36, 37

Statistics and probability

1	Data	Pages
	Collecting information	33, 61, 97, 130
	Using data displays	25, 53, 61, 97, 120
2	Chance	Pages
	Identify, describe possible outcomes	81, 128

1 Dictionary

adding (plus or combine)

When we join groups of objects together, we are adding them together.

adding on

If we add 5 and 3 we count on from 5, (e.g. 5... 6, 7, 8) 5 and 3 make 8.

area


Area is the amount of space on a shape.

capacity

Capacity is the amount that a container can hold.

centimetre

A unit of length.

This red line is 1 cm long. 

● 100 cm = 1 m

cents (c)

Our money system is made up of cents and dollars. 100 cents (100c) makes 1 dollar (\$1).

The silver coins are 5 cents, 10 cents, 20 cents and 50 cents.

chance

The possibility of something happening:

- possible: can happen
- might happen: can happen
- likely: will probably happen
- unlikely: will probably not happen
- more likely: compared to another event, this has more chance of happening.

coins



5c 10c 20c 50c \$1 \$2

collection

A collection is a group of objects.

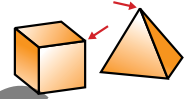
column

A column is a line of objects going down. Here are 4 columns of 3.



corner

A corner is where sides or edges meet at a point.



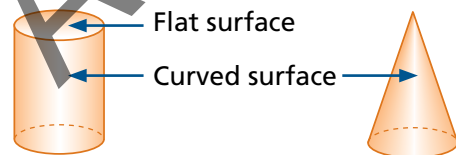
curved line

A curved line is not straight.



curved surface

A curved surface on a 3D object is not flat. It allows an object to roll. A cylinder and a cone each have one curved surface.



data display

A data display shows categories of objects and allows us to compare them.

Graph: Cats



Dogs

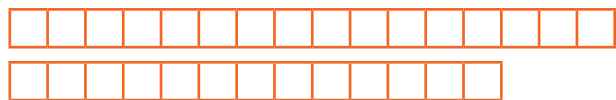


Table:

Dogs	Cats
4	2

difference

How many more?



The difference between 16 and 13 is 3.

For smaller numbers, line up each group in a row to find the difference.

For larger numbers, place the numbers on a number line to find the difference.

dollars (\$)

Our money system is made up of cents and dollars.

100 cents (100c) makes 1 dollar (\$1).

The gold coins are \$1 (1 dollar) and \$2 (2 dollars).

The notes are \$5, \$10, \$20, \$50, \$100.

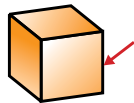
double

Double means the same thing twice.

Double 4 means $4 + 4 = 8$

edge

An edge is where two faces of a 3D object meet.



equal groups

Groups that have the same number of members.



equals sign =

The equals sign means "makes" or "is equal to" or "is the same as" (e.g. $2 + 3 = 4 + 1$).

estimate

A good guess.

face

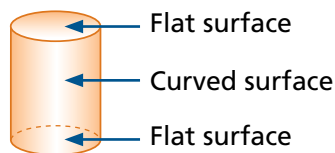
A flat surface that has straight sides (e.g. the side of a box).

flat surface

A face on a 3D object.

It is not curved.

It allows an object to slide.



A cylinder has 2 flat surfaces, one on each end, and one curved surface.

friends of ten

Numbers that add together to make 10.

The friends of 10 are 1 and 9, 2 and 8,

3 and 7, 4 and 6, 5 and 5, 6 and 4, 7 and 3,

8 and 2, 9 and 1.

graph

See *data display*.

half

One of two equal parts.

One half of the rectangle is coloured.



halfway point

The halfway point is the middle position.

hefting

To compare masses by lifting them with your hands.



left and right

● Left



● Right



The left hand makes an "L" for left.

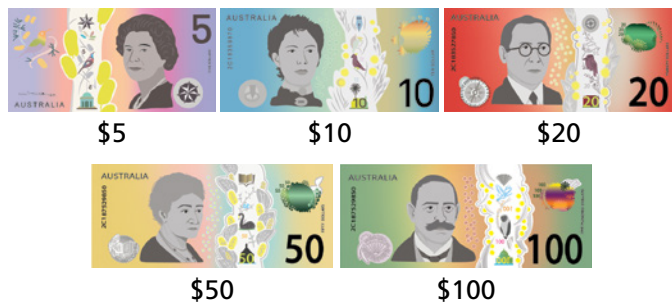
length words

distance	long	tall
deeper	longer	taller
higher	short	thicker
lower	shorter	thinner

mass words

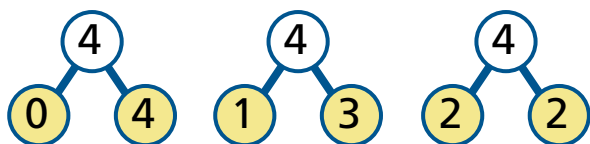
heavy	light	weigh
heavier	lighter	weight
heaviest	lightest	balanced

notes



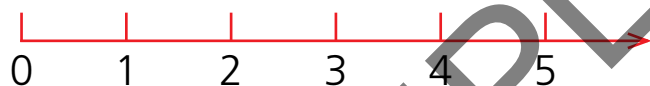
number bonds

Pairs of numbers that add to make a specific number (e.g. 0 and 4, 1 and 3, and 2 and 2 all make 4).



number line

A number line is a line that shows numbers in order. Number lines can be used for many things (e.g. counting, adding and subtracting).



number sentence

A number sentence uses numerals and symbols (e.g. 4 and 6 makes 10. This can be written as $4 + 6 = 10$).

numeral

A numeral is a written number symbol such as 7, 18, 92, 120.

odd and even numbers

Odd numbers end in 1, 3, 5, 7 or 9 (e.g. 49).

Even numbers end in 2, 4, 6, 8 or 0 (e.g. 32).

ordinal number

Ordinal numbers describe the order or position of something (e.g. 1st, 2nd, 3rd, 4th, 5th).

partitioning

Partitioning is when a group of objects is broken up into two parts. The more objects there are in the group, the more different combinations can be made.

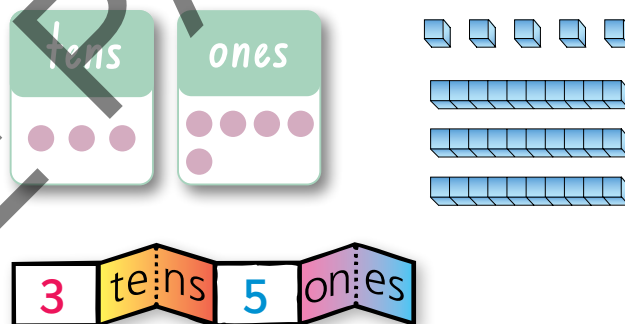
(e.g. The number 8 can be partitioned as 7 and 1, 6 and 2, 5 and 3, and 4 and 4.)

pattern

A pattern is a group of numbers, objects, shapes, colours, sounds or actions that are repeated over and over again.

place value

The position of each digit of a numeral holds a different value.



place-value blocks

These are used to represent numbers.

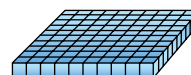
ones block



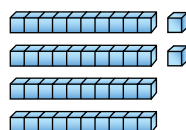
tens block



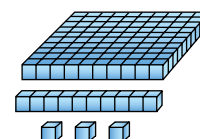
hundreds block



42 shown as



113 shown as



quarter

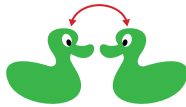
One of four equal parts.

One quarter of the rectangle is coloured.



reflection (or flip)

A mirror image.



right and left

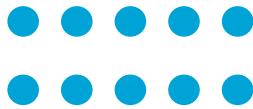
● Left



● Right

row

A row is a line of objects going across. Here are 2 rows of 5.



sharing

When sharing, we make sure that each share is the same size.

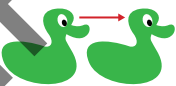


2 people could share these 6 balls. Each person would get 3 balls.

If two groups are not the same, we can make fair shares by moving items from the larger group to the smaller group.

slide

Moving a shape in any direction without changing the size or orientation.



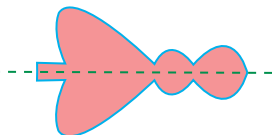
straight line

A straight line has no bends or curves.



symmetry

A shape has symmetry when one side is the mirror-image of the other. It can be folded so that the two halves match, exactly.

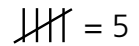


take away (subtract or minus)

When we remove objects from a group we call this "take away".

tally marks

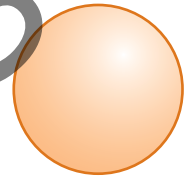
Tally marks are used to keep count. Groups of 5 are used.



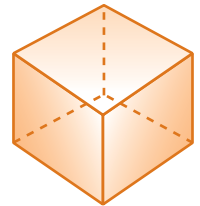
three-dimensional (3D) objects

3D objects are three-dimensional. They have length, width and height.

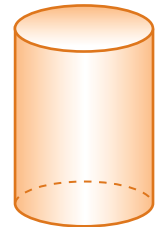
spheres (ball-shaped objects) are curved and round. They can roll.



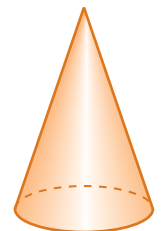
cubes (box-shaped objects) have 6 square faces. They can slide.



cylinders (can-shaped objects) have 2 flat surfaces and 1 curved surface. They can roll and slide.

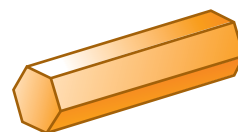


cones (cone-shaped objects) have 1 flat surface and 1 curved surface. They can roll and slide.



prisms

A prism has rectangular faces joining two identical bases at both ends.



hexagonal prism



triangular prism

time words

morning	day
afternoon	night

Days

Sunday	Monday	Tuesday	Wednesday
Thursday	Friday	Saturday	

Months

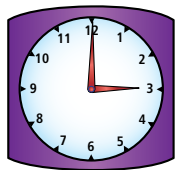
January	February	March	April
May	June	July	August
September	October	November	December

Seasons

Summer	Autumn	Winter	Spring
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● clocks

analog clock



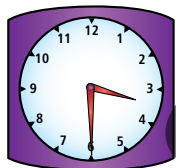
3 o'clock

digital clock



● o'clock

When the long hand (minute hand) is pointing to 12, the time is an "o'clock" time. The short hand (hour hand) points to the hour (e.g. the hour hand above is pointing to the 3 so it is 3 o'clock).



half past 3



● half past

When the long hand (hour hand) is pointing to the 6, the time is a "half past" time. The short hand (hour hand) above is pointing halfway between the 3 and the 4 so it is half past 3.

total

The number of items altogether. The result once everything has been added.

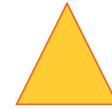
two-dimensional (2D) shapes

Flat shapes are two-dimensional. They have length and width.



circle

1 curved side



triangle

3 sides
3 corners



square

4 equal sides
4 corners



rectangle

2 equal long sides
and 2 equal short sides,
like a stretched square

oval

1 curved side, like
a squashed circle



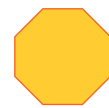
pentagon

5 sides
5 corners



hexagon

6 sides
6 corners



octagon

8 sides
8 corners



quadrilaterals

4 sides and 4 corners. Squares and rectangles are quadrilaterals.

vertex (plural is vertices)

A corner of a shape or object.

volume

Volume is the amount of space an object takes up.

The mouse and the platypus




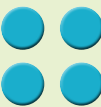
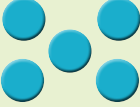


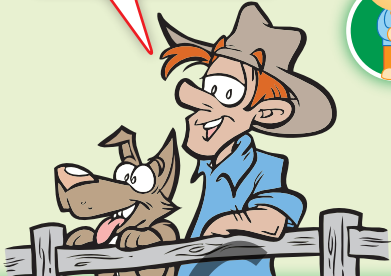
- 1 How many animals are in this picture?
- 2 What else can you count in this picture?
- 3 What are the mouse and the platypus doing?
- 4 The mouse is going to make a hat for its costume. Why should the mouse's hat have no ears?
- 5 Would it take longer for the mouse to make its hat or its tail?
- 6 How many noses can you see in this picture?
- 7 A snout is the nose and mouth of an animal. Would it take longer for the platypus to make the ears or the snout?
- 8 How are the mouse and the platypus different?
- 9 Make up your own question about this picture.
- 10 Which of these questions do you like best? Why do you like it?




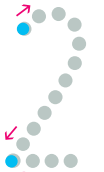


These are the first five counting numbers.



				
1	2	3	4	5
one	two	three	four	five



1 Write the numeral and its name. Draw the number of balls.




Match each word to a numeral on the number track.

- one
- zero
- three
- two
- five
- four



This is a number track.

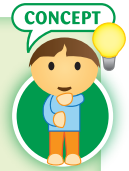
					
0	1	2	3	4	5





6	7	8	9	10
six	seven	eight	nine	ten

5 and 5 makes 10.



1 Write the numeral and its name. Draw the number of hats.



Match each word to a numeral on the number track.

two	zero	four	six	eight	seven	ten	nine			
0	1	2	3	4	5	6	7	8	9	10

FUN SPOT





ten ones



one ten

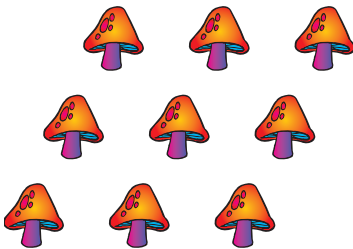


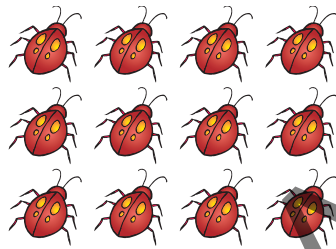
1 True (T) or False (F)? Ten ones as the same as one ten.

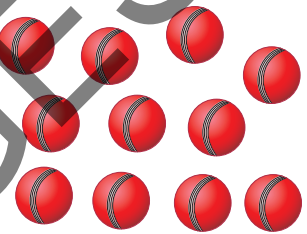
2 Trace the numerals and words below.



3 Count and write the number of objects.







4 Count forwards and backwards. Colour every second number. Discuss.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

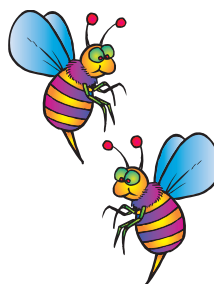
5 Trace and write the numerals.











6 How many blocks?

1 ten and 0 ones





1 ten and 1 one





1 ten and 2 ones





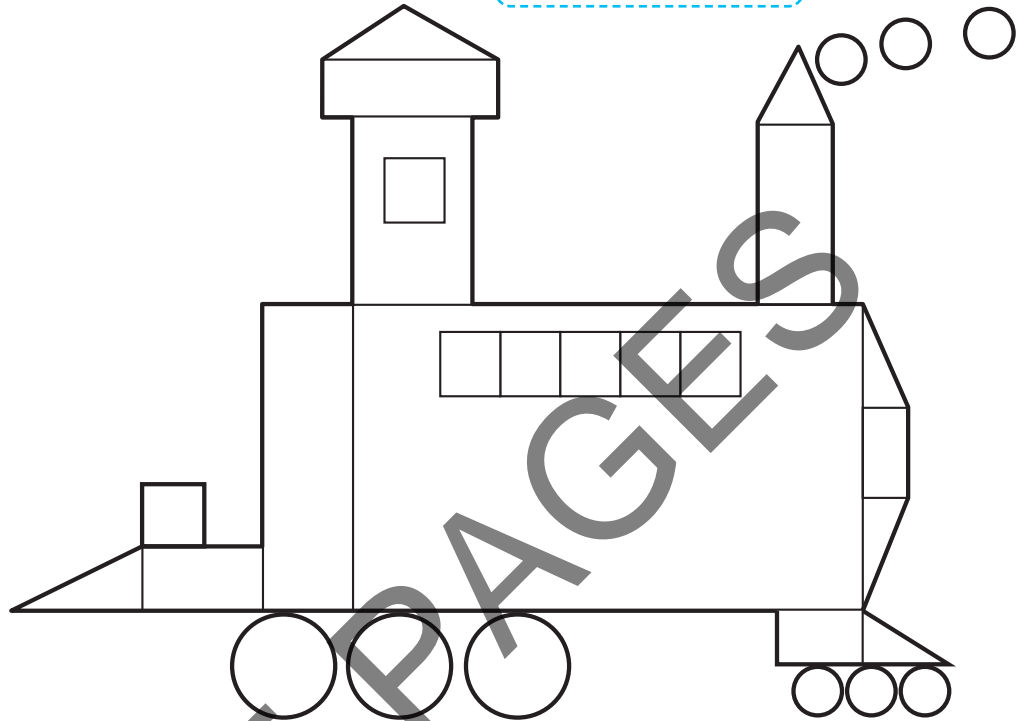
 two shape (CT, CT)

 three shapes (SCT, SCT)



1 Colour the shapes in the picture:

SCT means 'square, circle, triangle'.



How many circles?

How many squares?

How many triangles?

How many rectangles?

two-shape pattern:

Code: SC, SC, SC...

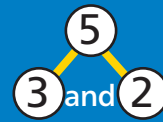


three-shape pattern:

Code: RST, RST ...



2 Draw a two-shape pattern and a three-shape pattern of your own.

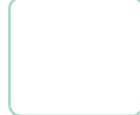


1 a



and makes .

b



and makes .

c



and makes .

d



and makes .

e



and makes .

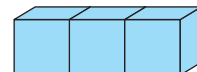
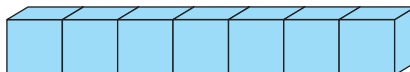
2 Draw your own picture to complete the problem.

SAMPLE PAGES

5 balls and 2 balls makes balls.

3 Write your own number sentence to solve the problem.

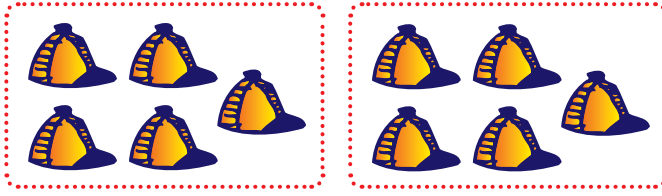
How many blocks?





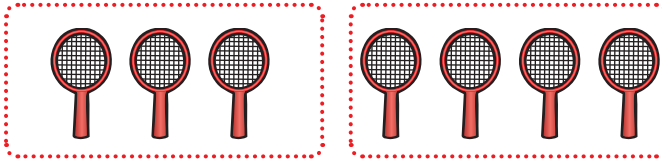
1 Complete the number sentences.

a



$$\square + \square = \square$$

b



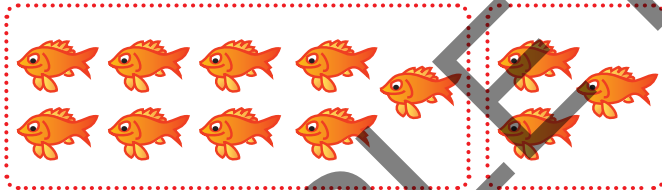
$$\square + \square = \square$$

c



$$\square + \square = \square$$

d

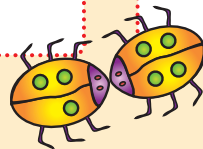
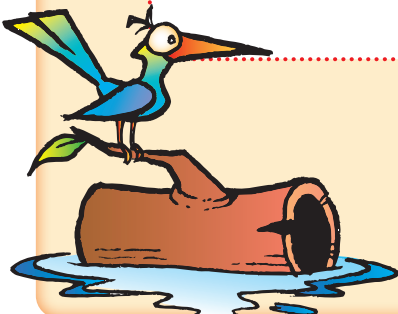


$$\square + \square = \square$$

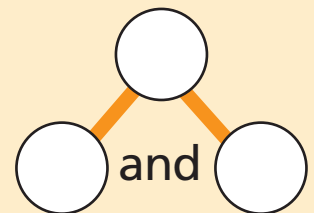
Make your own number sentence and number bond.

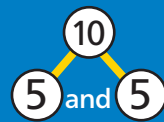


SAMPLE PAGES



$$\square + \square = \square$$





1 Numbers can make patterns. Use the faces to find answers. Talk about patterns you can see.

Add each row.

	1 and 8 makes	<input type="text"/>		1	9	<input type="text"/>
	2 and 7 makes	<input type="text"/>		2	8	<input type="text"/>
	3 and 6 makes	<input type="text"/>		3	7	<input type="text"/>
	4 and 5 makes	<input type="text"/>		4	6	<input type="text"/>
	5 and 4 makes	<input type="text"/>		5	5	<input type="text"/>
	6 and 3 makes	<input type="text"/>		6	4	<input type="text"/>
	7 and 2 makes	<input type="text"/>		7	3	<input type="text"/>
	8 and 1 makes	<input type="text"/>		8	2	<input type="text"/>
		<input type="text"/>		9	1	<input type="text"/>

Use counters to make patterns of your own for 6 and 5.



4 = 1 + 3 → +

4 = 2 + 2 → +

4 = 3 + 1 → +

Investigation: and and (forming a triangle with 4 at the top and 2s at the bottom)

Investigation: and and (forming a triangle with 4 at the top, 3 and 1 at the bottom)

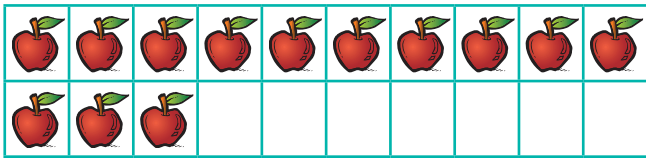


We can make larger numbers by counting on from 10.

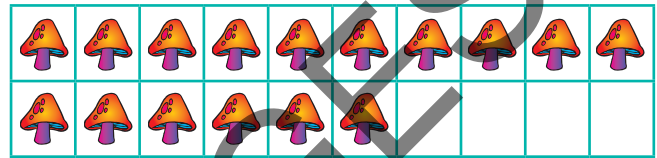


... 11, 12, 13, 14

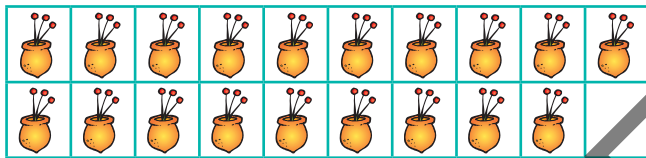
1 Count the objects and complete.



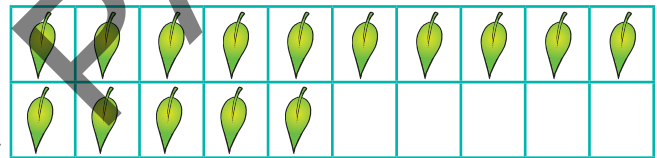
10 and 3 is .



10 and 6 is .

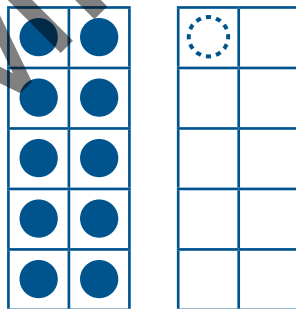


10 and 9 is .



10 and 5 is .

2 10 and 1 is .



10 and 2 is .

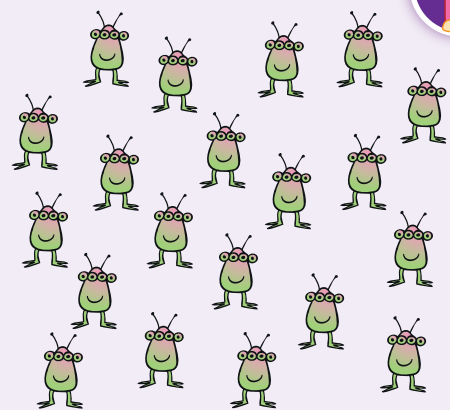
10 and 4 is .

10 and 7 is .

10 and 8 is .



Circle groups of 10.



tens is .