

AUSTRALIAN
Signpost
MATHS

NSW



STAGE 2

4

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Australian Signpost Maths NSW 4 (Stage 2) Suggested Program

Term 1

Week - Program	Page	Unit	Title	Strand	Syllabus Code/s	Syllabus sub-elements
Week 1	Revision and testing					
Week 2	Revision and testing					
	24	2:01	Number patterns	Number and algebra	MA2-MR-01	Multiplicative relations B
	83	3:01	Analog time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
Week 3	1	1:01	Numbers to 10 000	Number and algebra	MA2-RN-01	Representing numbers using place value B
	2	1:02	Numbers to 100 000	Number and algebra	MA2-RN-01	Representing numbers using place value B
	3	1:03	Rounding off	Number and algebra	MA2-RN-01	Representing numbers using place value B
	4	1:04	Partitioning large numbers	Number and algebra	MA2-RN-01	Representing numbers using place value B
	25	2:02	Multiplication tables revision	Number and algebra	MA2-MR-01	Multiplicative relations B
Week 4	5	1:05	Fractions	Number and algebra	MA2-PF-01	Partitioned Fractions B
	6	1:06	Comparing fractions	Number and algebra	MA2-PF-01	Partitioned Fractions B
	84	3:02	Analog and digital time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
	85	3:03	Analog and digital time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
	86	3:04	Analog and digital time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
Week 5	26	2:03	X 4 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	27	2:04	Times tables review	Number and algebra	MA2-MR-01	Multiplicative relations B
	87	3:05	Perimeter	Measurement	MA2-GM-02	Geometric measure B (Length)
	88	3:06	Centimetres and millimetres	Measurement	MA2-GM-02	Geometric measure B (Length)
	89	3:07	Using millimetres	Measurement	MA2-GM-02	Geometric measure B (Length)
Week 6	7	1:07	Fractions beyond 1	Number and algebra	MA2-PF-01	Partitioned Fractions B
	8	1:08	Fractions beyond 1	Number and algebra	MA2-PF-01	Partitioned Fractions B
	90	3:08	The square centimetre	Measurement and space	MA2-2DS-03	Two-dimensional spatial structure B (Area)
	91	3:09	The square centimetre	Measurement and space	MA2-2DS-03	Two-dimensional spatial structure B (Area)
	92	3:10	The square centimetre	Measurement and space	MA2-2DS-03	Two-dimensional spatial structure B (Area)

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Term 1 cont.

Week 7	28	2:05	2, 5 and 10 times tables	Number and algebra	MA2-AR-01	Additive relations B
	29	2:06	Patterns in + and -	Number and algebra	MA2-AR-01	Additive relations B
	121	4:01	Flip, slide, turn	Space	MA2-2DS-02	Two-dimensional spatial structure B (Transformations)
	122	4:02	Angles and 2D shapes	Measurement	MA2-GM-03	Geometric measure B (Angles)
	123	4:03	Comparing angles	Measurement	MA2-GM-03	Geometric measure B (Angles)
Week 8	9	1:09	Numbers to 1 000 000	Number and algebra	MA2-RN-01	Representing numbers using place value B
	10	1:10	Numbers to 1 000 000	Number and algebra	MA2-RN-01	Representing numbers using place value B
	30	2:07	Addition to 99 with trading	Number and algebra	MA2-AR-01	Additive relations B
	31	2:08	Addition to 99 with trading	Number and algebra	MA2-AR-01	Additive relations B
	148	5:01	Drawing tables	Statistics	MA2-DATA-01	Data B
Week 9	11	1:11	Rounding off	Number and algebra	MA2-RN-01	Representing numbers using place value B
	12	1:12	Equivalent fractions	Number and algebra	MA2-PF-01	Partitioned fractions B
	13	1:13	Equivalent fractions	Number and algebra	MA2-PF-01	Partitioned fractions B
	149	5:02	Chance	Probability	MA2-CHAN-01	Chance B
	150	5:03	Chance	Probability	MA2-CHAN-01	Chance B
Week 10	93	3:11	Using measurement scales	Measurement	MA2-GM-02, NSM-01	Geometric measure B (Length), Non-Spatial Measure B (Mass)

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Term 2

Week - Program	Page	Unit	Title	Strand	Syllabus Code/s	Syllabus sub-elements
Week 11	14	1:14	Comparing fractions	Number and algebra	MA2-PF-01	Partitioned fractions B
	15	1:15	Tenths and fifths	Number and algebra	MA2-RN-02	Representing numbers using place value B
	16	1:16	Place value using tenths	Number and algebra	MA2-RN-02	Representing numbers using place value B
	32	2:09	Jump strategy, +	Number and algebra	MA2-AR-01	Additive relations B
	33	2:10	Jump strategy, -	Number and algebra	MA2-AR-01	Additive relations B
Week 12	17	1:17	Decimals	Number and algebra	MA2-RN-02	Representing numbers using place value B
	18	1:18	Decimals	Number and algebra	MA2-RN-02	Representing numbers using place value B
	19	1:19	Decimals and place value	Number and algebra	MA2-RN-02	Representing numbers using place value B
	34	2:11	x 8 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	35	2:12	x 8 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
Week 13	20	1:20	Comparing decimals	Number and algebra	MA2-RN-02	Representing numbers using place value B
	21	1:21	Place value to hundredths	Number and algebra	MA2-RN-02	Representing numbers using place value B
	124	4:04	3D objects	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D objects)
	125	4:05	Prisms and pyramids	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D objects)
Week 14	22	1:22	Place value to hundredths	Number and algebra	MA2-RN-02	Representing numbers using place value B
	23	1:23	Reading and writing decimals	Number and algebra	MA2-RN-02	Representing numbers using place value B
	126	4:06	Faces of prisms and pyramids	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D objects)
	127	4:07	Prisms and pyramids	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D objects)
Week 15	36	2:13	Addition, trading 2 tens	Number and algebra	MA2-AR-01	Additive relations B
	37	2:14	Addition involving hundreds	Number and algebra	MA2-AR-01	Additive relations B
	38	2:15	Addition problems to 99	Number and algebra	MA2-AR-01	Additive relations B
	151	5:04	Using graphs	Statistics	MA2-DATA-02	Data B
	152	5:05	Reading graphs	Statistics	MA2-DATA-02	Data B

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Week 16	39	2:16	x 3, x 6 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	40	2:17	x 3, x 6 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	94	3:12	The millilitre	Measurement	MA2-3DS-02	Three-dimensional spatial structure B (Capacity)
	95	3:13	Using millilitres	Measurement	MA2-3DS-02	Three-dimensional spatial structure B (Capacity)
	96	3:14	Using millilitres	Measurement	MA2-3DS-02	Three-dimensional spatial structure B (Capacity)
Week 17	41	2:18	Subtraction with trading	Number and algebra	MA2-AR-01	Additive relations B
	42	2:19	Subtracting from tens	Number and algebra	MA2-AR-01	Additive relations B
	43	2:20	Subtracting with trading	Number and algebra	MA2-AR-01	Additive relations B
	128	4:08	Drawing angles	Measurement	MA2-GM-03	Geometric measure B (Angles)
	129	4:09	Angles at quarter and half turns	Measurement	MA2-GM-03	Geometric measure B (Angles)
Week 18	44	2:21	x 9 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	45	2:22	x 9 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	130	4:10	Investigating polygons	Space	MA2-2DS-01	Two-dimensional spatial structure B (2D shapes)
	131	4:11	Visualising shapes	Space	MA2-2DS-02	Two-dimensional spatial structure B (Transformations)
Week 19	46	2:23	Addition to 999	Number and algebra	MA2-AR-01	Additive relations B
	47	2:24	Addition to 999	Number and algebra	MA2-AR-01	Additive relations B
	48	2:25	Writing algorithms	Number and algebra	MA2-AR-01	Additive relations B
	132	4:12	Maps	Measurement and space	MA2-GM-01	Geometric Measure B (Position and location)
	133	4:13	Creating a map	Measurement and space	MA2-GM-01	Geometric Measure B (Position and location)
Week 20	97	3:15	Using L and mL	Measurement	MA2-GM-03	Three-dimensional spatial structure B (Volume)
	153	5:06	Ordered events	Probability	MA2-CHAN-01	Chance B
	154	5:07	Chance used in games	Probability	MA2-CHAN-01	Chance B

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Term 3

Week - Program	Page	Unit	Title	Strand	Syllabus Code/s	Syllabus sub-elements
Week 21	49	2:26	What's the rule?	Number and algebra	MA2-AR-01	Additive relations B
	50	2:27	Number patterns	Number and algebra	MA2-AR-01	Additive relations B
	134	4:14	Cones, cylinders and spheres	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D objects)
	135	4:15	Views of 3D objects	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D objects)
Week 22	51	2:28	x 7 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	52	2:29	x 7 Tables	Number and algebra	MA2-MR-01	Multiplicative relations B
	53	2:30	Multiplication tables review	Number and algebra	MA2-MR-01	Multiplicative relations B
	98	3:16	Using grams	Measurement	MA2-NSM-01	Non-spatial measure B (Mass)
	99	3:17	Measuring mass	Measurement	MA2-NSM-01	Non-spatial measure B (Mass)
Week 23	54	2:31	Subtraction without trading to 999	Number and algebra	MA2-AR-01	Additive relations B
	55	2:32	Subtraction with trading to 999	Number and algebra	MA2-AR-01	Additive relations B
	100	3:18	Telling time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
	101	3:19	Time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
	102	3:20	am and pm time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
Week 24	56	2:33	Subtraction with trading to 999	Number and algebra	MA2-AR-01	Additive relations B
	57	2:34	Subtraction with 2 trades to 999	Number and algebra	MA2-AR-01	Additive relations B
	103	3:21	Recording length	Measurement	MA2-GM-02	Geometric measure B (Length)
	104	3:22	Comparing measurements	Measurement	MA2-GM-02	Geometric measure B (Length)
	105	3:23	Using measurement scales	Measurement and space	MA2-GM-02, MA2-3DS-02, MA2-NSM-02	Geometric measure B (Length), 3D spatial structure B (Volume), Non-spatial measure B (Mass)
Week 25	58	2:35	Mental strategies, + and -	Number and algebra	MA2-AR-01	Additive relations B
	59	2:36	Mental strategies, + and -	Number and algebra	MA2-AR-01	Additive relations B
	106	3:24	The square metre	Measurement and space	MA2-2DS-03	Two-dimensional spatial structure B (Area)
	107	3:25	The area of a triangle	Measurement and space	MA2-2DS-03	Two-dimensional spatial structure B (Area)
	108	3:26	The area of a triangle	Measurement and space	MA2-2DS-03	Two-dimensional spatial structure B (Area)

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Term 3 cont.

Week 26	60	2:37	Subtracting from hundreds	Number and algebra	MA2-AR-01	Additive relations B
	61	2:38	Subtracting from hundreds strategy	Number and algebra	MA2-AR-01	Additive relations B
	136	4:16	Compass directions	Measurement	MA2-GM-01	Geometric measure B (Position and location)
	137	4:17	Compass directions	Measurement	MA2-GM-01	Geometric measure B (Position and location)
	155	5:08	Tally marks	Statistics	MA2-DATA-01, 02	Data B
Week 27	62	2:39	Division as repeated subtraction	Number and algebra	MA2-MR-01	Multiplicative relations B
	63	2:40	Understanding division	Number and algebra	MA2-MR-01	Multiplicative relations B
	138	4:18	Describing position	Measurement	MA2-GM-01	Geometric measure B (Position and location)
	139	4:19	Using position in maps	Measurement	MA2-GM-01	Geometric measure B (Position and location)
	156	5:09	Collecting information	Statistics	MA2-DATA-01	Data B
Week 28	64	2:41	Division facts	Number and algebra	MA2-MR-01, 02	Multiplicative relations B
	65	2:42	Division facts	Number and algebra	MA2-MR-01, 02	Multiplicative relations B
	109	3:27	Using grams	Measurement	MA2-NSM-01	Non-spatial measure B (Mass)
	110	3:28	Measuring mass	Measurement	MA2-NSM-01	Non-spatial measure B (Mass)
Week 29	66	2:43	Odd and even numbers	Number and algebra	MA2-AR-01	Additive relations B
	67	2:44	Odd and even	Number and algebra	MA2-AR-01, MR-01	Additive relations B, Multiplicative relations B
	112	3:29	Using am and pm time	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
	113	3:30	Seconds	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
	114	3:31	The stopwatch	Measurement	MA2-NSM-02	Non-spatial measure B (Time)
Week 30	68	2:45	Division using grid	Number and algebra	MA2-MR-02	Multiplicative relations B
	69	2:46	x and \div (by 2, 4, 8)	Number and algebra	MA2-MR-02	Multiplicative relations B

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Week - Program	Page	Unit	Title	Strand	Syllabus Code/s	Syllabus sub-elements
Week 31	70	2:47	Mental strategies, \times and \div	Number and algebra	MA2-MR-01	Multiplicative relations B
	71	2:48	Working with numbers	Number and algebra	MA2-MR-01, 02	Multiplicative relations B
	115	3:32	Comparing lengths	Measurement	MA2-GM-02	Geometric measure B (Length)
	116	3:33	Using mm when building	Measurement	MA2-GM-02	Geometric measure B (Length)
	117	3:34	Length on a map	Measurement	MA2-GM-02	Geometric measure B (Length)
Week 32	72	2:49	\times and \div tables (by 3, 6, 9)	Number and algebra	MA2-MR-01	Multiplicative relations B
	73	2:50	Division facts	Number and algebra	MA2-MR-01, 02	Multiplicative relations B
	140	4:20	Visualising shapes	Space	MA2-2DS-02	Two-dimensional spatial structure B (2D shape)
	141	4:21	Acute and obtuse angles	Measurement	MA2-GM-03	Geometric measure B (Angles)
	142	4:22	Angles of any size	Measurement	MA2-GM-03	Geometric measure B (Angles)
Week 33	74	2:51	Money	Number and algebra	MA2-AR-01	Additive relations B
	75	2:52	Rounding off money	Number and algebra	MA2-AR-01	Additive relations B
	76	2:53	Counting change	Number and algebra	MA2-RN-01, AR-01	Representing numbers using place value B, Additive relations B
	157	5:10	Using spinners	Probability	MA2-CHAN-01	Chance B
	158	5:11	Unequal outcomes	Probability	MA2-CHAN-01	Chance B
Week 34	77	2:54	Multiplying by 10, 100, 1000	Number and algebra	MA2-MR-01	Multiplicative relations B
	78	2:55	Dividing by 10, 100, 1000	Number and algebra	MA2-MR-01	Multiplicative relations B
	143	4:23	Horizontal and vertical	Space	MA2-2DS-01	Two-dimensional spatial structure B (2D shape)
	144	4:24	Tessellating designs	Space	MA2-2DS-02	Two-dimensional spatial structure B (2D shape, Transformations)
	145	4:25	Tessellations	Space	MA2-2DS-02	Two-dimensional spatial structure B (2D shape, Transformations)
Week 35	79	2:56	Linking \div and \times	Number and algebra	MA2-MR-02	Multiplicative relations B
	80	2:57	Missing number strategies	Number and algebra	MA2-MR-02	Multiplicative relations B
	146	4:26	Spreadsheets	Measurement	MA2-GM-02	Geometric measure B (Position and location)
	159	5:12	Surveys	Statistics	MA2-DATA-01	Data B

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Term 4 cont.

Week 36	81	2:58	Partitioning, + and -	Number and algebra	MA2-AR-01	Additive relations B
	82	2:59	Mental strategies, + and -	Number and algebra	MA2-AR-01	Additive relations B
	118	3:35	Problem solving	Measurement	MA2-GM-02, 3DS-02, NSM-01/02	Geometric measure B (Length), 3D spatial structure B (Capacity), Non-spatial measure B (Mass, Time)
	119	3:36	Problem solving	Measurement	MA2-GM-02, 3DS-02, NSM-01	Geometric measure B (Length), 3D spatial structure B (Capacity), Non-spatial measure B (Mass)
	147	4:27	Drawing views of objects	Space	MA2-3DS-01	Three-dimensional spatial structure B (3D space)
	160	5:13	Graphing data	Statistics	MA2-DATA-02	Data B
Week 37	120	3:37	Calculating volume	Measurement and space	MA2-3DS-02	Three-dimensional spatial structure B (Volume)
	121	3:38	Personal benchmarks	Measurement	MA2-GM-02, 2DS-03, 3DS-02, NSM-01	Geometric measure B (Length), 2D spatial structure B (Area), 3D spatial structure B (Capacity), Non-spatial measure B (Mass)
	161	5:14	Chance experiments	Probability	MA2-CHAN-01	Chance B
	162	5:15	Carry out your own survey	Statistics	MA2-DATA-01	Data B
	163	5:16	Chance experiments	Probability	MA2-CHAN-01	Chance B

Australian Signpost Maths NSW 4 (Stage 2) Syllabus Map

Strand	Substrand	New NSW Outcome	New Content Description	Australian Signpost Maths NSW Lessons
Number and Algebra	Representing Numbers Using Place Value B	MA2-RN-01: applies an understanding of place value and the role of zero to represent numbers to at least tens of thousands	Whole Numbers: Order numbers in the thousands	1:01 Numbers to 10 000 1:02 Numbers to 100 000 1:03 & 11 Rounding off 1:04 Partitioning large numbers 1:09-10 Numbers to 1 000 000
			Whole Numbers: Apply place value to partition, regroup and rename numbers up to 4 digits	
			Whole Numbers: Recognise and represent numbers that are 10, 100 or 1000 times as large	
		MA2-RN-02: represents and compares decimals up to 2 decimal places using place value	Decimals: Extend the application of the place value system from whole numbers to tenths and hundredths	1:15 Tenths and fifths 1:16 Place value using tenths 1:17-18 Decimals 1:19 Decimals and place value 1:20 Comparing decimals 1:21-22 Place value to hundredths 1:23 Reading and writing decimals
Decimals: Make connections between fractions and decimal notation				
Number and Algebra	Additive Relations B	MA2-AR-01: selects and uses mental and written strategies for addition and subtraction involving 2- and 3-digit numbers	Partition, rearrange and regroup numbers to at least 1000 to solve additive problems	2:05 Addition, no trading 2:06 Addition and subtraction, no trading 2:07-8 Addition to 99 with trading 2:09 Jump strategy, + 2:10 Jump strategy, - 2:13 Addition, trading 2 tens 2:14 Addition involving hundreds 2:15 Addition problems to 99 2:18 & 20 Subtraction with trading 2:19 Subtracting from tens 2:23-4 Addition to 999 2:25 Writing algorithms 2:26 What's the rule? 2:27 Number patterns 2:31 Subtraction without trading to 999 2:32-3 Subtraction with trading to 999 2:34 Subtraction with 2 trades to 999 2:35 Mental strategies, + 2:36 Mental strategies, + and - 2:37 Subtraction from hundreds 2:38 Subtraction from hundreds strategy 2:43 Odd and even numbers 2:44 Odd and even 2:51 Money 2:52 Rounding off money 2:53 Counting change 2:58 Partitioning, + and - 2:59 Mental strategies, + and -
			Apply addition and subtraction to familiar contexts, including money and budgeting	
		MA2-AR-02: completes number sentences involving addition and subtraction by finding missing values	Complete number sentences involving additive relations to find unknown quantities	2:57 Missing number strategies

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Number and Algebra	Multiplicative Relations B	<p>MA2-MR-01: Represents and uses the structure of multiplicative relations to 10×10 to solve problems</p> <p>MA2-MR-02: completes number sentences involving multiplication and division by finding missing values</p>	Investigate number sequences involving related multiples	2:01 Number patterns 2:02 Multiplication tables revision 2:03 $\times 4$ tables 2:04 Times tables review 2:11-12 $\times 8$ tables 2:16 $\times 3$, $\times 6$ tables 2:17 $\times 3$ and $\times 6$ tables 2:21-22 $\times 9$ tables 2:28-29 $\times 7$ tables 2:30 Multiplication review 2:39 Division as repeated subtraction 2:40 Understanding division 2:41-42 & 50 Division facts 2:44 Odd and even 2:45 Division using grid 2:46 \times and \div (by 2, 4, 8) 2:47 Mental strategies, \times and \div 2:48 Working with numbers 2:49 \times and \div tables (by 3, 6, 9) 2:54 Multiplying by 10, 100, 1000 2:55 Dividing by 10, 100, 1000 2:56 Linking \div and \times 2:57 Missing number strategies
			Use known number facts and strategies	
			Use the structure of the area model to represent multiplication and division	
			Use number properties to find related multiplication facts	
			Operate with multiples of 10	
			Represent and solve word problems with number sentences involving multiplication or division	
Number and Algebra	Partitioned Fractions B	<p>MA2-PF-01: represents and compares halves, quarters, thirds and fifths as lengths on a number line and their related fractions formed by halving (eighths, sixths and tenths)</p>	Model equivalent fractions as lengths	1:05 Fractions 1:06 & 14 Comparing fractions 1:07-8 Fractions beyond 1 1:12-13 Equivalent fractions
			Represent fractional quantities equal to and greater than one	
Measurement	Geometric Measure B	<p>MA2-GM-01: uses grid maps and directional language to locate positions and follow routes</p>	Position: Create and interpret grid maps	4:12 Maps 4:13 Creating a map 4:16-17 Compass directions 4:18 Describing position 4:19 Using position in maps 4:26 Spreadsheets
			Position: Use directional language and describe routes with grid maps	
		<p>MA2-GM-02: measures and estimates lengths in metres, centimetres and millimetres</p>	Length: Use scaled instruments to measure and compare lengths	3:05 Perimeter 3:06 Centimetres and millimetres 3:07 Using millimetres 3:11 Using measurement scales 3:21 Recording length 3:22 Comparing measurements 3:23 Using measurement scales 3:32 Comparing lengths 3:33 Length on a map 3:35-6 Problem solving 3:38 Personal benchmarks
<p>MA2-GM-03: identifies angles and classifies them by comparing to a right angle</p>	Angles: Compare angles to a right angle	4:02 Angles and 2D shapes 4:03 Comparing angles 4:08 Drawing angles 4:09 Angles at quarter and half turns 4:21 Acute and obtuse angles 4:22 Angles of any size		

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Space	Two-Dimensional (2D) Spatial Structure B	MA2-2DS-01: compares two-dimensional shapes and describes their features	2D shapes: Create two-dimensional shapes that result from combining and splitting common shapes	4:10 Investigating polygons 4:23 Horizontal and vertical
		MA2-2DS-02: performs transformations by combining and splitting two-dimensional shapes	2D shapes: Create symmetrical patterns and shapes	4:01 Flip, slide and turn 4:11 & 20 Visualising shapes 4:24 Tessellating designs 4:25 Tessellations
		MA2-2DS-03: estimates, measures and compares areas using square centimetres and square metres	Area: Measure the areas of shapes using the grid structure Area: Compare surfaces using familiar metric units of area	3:08-10 The square centimetre 3:24 The square metre 3:25-6 The area of a triangle 3:38 Personal benchmarks
Space	Three-Dimensional (3D) Spatial Structure B	MA2-3DS-01: makes and sketches models and nets of three-dimensional objects including prisms and pyramids	3D objects: Connect three-dimensional objects and two-dimensional representations	4:04 3D objects 4:05 & 7 Prisms and pyramids 4:06 Faces of prisms and pyramids 4:14 Cones, cylinders and spheres 4:15 Views of 3D objects 4:27 Drawing views of objects
		MA2-3DS-02: estimates, measures and compares capacities (internal volumes) using litres, millilitres and volumes using cubic centimetres	Volume: Use scaled instruments to measure and compare capacities (internal volumes)	3:12 The millilitre 3:13-14 Using millilitres 3:15 Using L and mL 3:23 Using measurement scales 3:35-6 Problem solving 3:37 Calculating volume 3:38 Personal benchmarks
Measurement	Non-Spatial Measure B	MA2-NSM-01: estimates, measures and compares the masses of objects using kilograms and grams	Mass: Use scaled instruments to measure and compare masses	3:11 Using measurement scales 3:16 & 27 Using grams 3:17 & 28 Measuring mass 3:23 Using measurement scales 3:35-6 Problem solving 3:38 Personal benchmarks
		MA2-NSM-02: represents and interprets analog and digital time in hours, minutes and seconds	Time: Represent and interpret digital time displays Time: Use am and pm notation	3:01 Analog time 3:02-4 Analog and digital time 3:18 Telling time 3:19 Time 3:20 am and pm time 3:29 Using am and pm time 3:30 Seconds 3:31 The stopwatch 3:35 Problem solving
Statistics	Data B	MA2-DATA-01: collects discrete data and constructs graphs using a given scale	Select and trial methods for data collection	5:01 Drawing tables 5:04 Using graphs 5:05 Reading graphs 5:08 Tally marks 5:09 Collecting information
		MA2-DATA-02: interprets data in tables, dot plots and column graphs	Construct and interpret data displays with many-to-one scales	5:12 Surveys 5:13 Graphing data 5:15 Carry out your own survey
Probability	Chance B	MA2-CHAN-01: records and compares the results of chance experiments	Describe the likelihood of outcomes of chance events Identify when events are affected by previous events	5:02-3 Chance 5:06 Ordered events 5:07 Chance used in games 5:10 Using spinners 5:11 Unequal outcomes 5:14 & 16 Chance experiments

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, 2024.

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

For Years 1 to 6, 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 NSW.



Structure of Australian Signpost Maths NSW

In the Year 3 to 6 books, the worksheet pages cover all three elements: Number sense and algebra, Measurement and geometry, and Statistics and probability.

These are presented in five chapters:

- Number and algebra
- Operations and algebra
- Measurement
- Space
- Statistics and probability.

This gives teachers flexibility in programming that is more appropriate to Years 3 to 6.

The contents cross-reference allows teachers to quickly find the pages where each concept has been covered.

Within the program, explicit teaching, critical and creative thinking, language development and identification and treatment of weaknesses are given high priority.

Identification 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.

Parallel progress retests are provided for further testing after remediation has taken place.

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

Special features of Australian Signpost Maths NSW

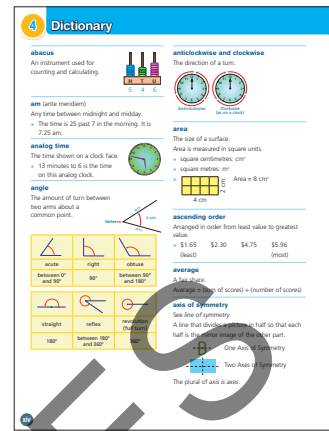
- **The traffic light icons**

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.

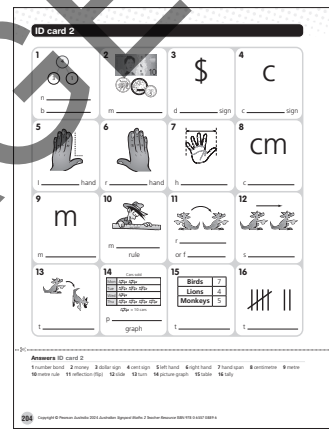
- **Dictionary**

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 xiv–xxiv of this book.



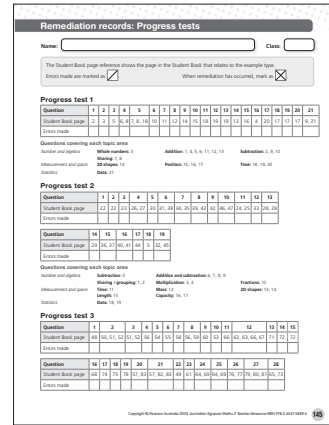
- **ID cards (Years 1 to 6)**

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.



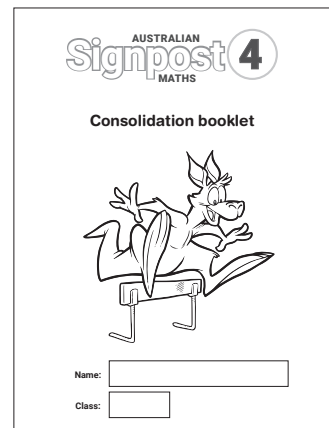
- **Progress tests**

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 3 Consolidation booklet**

This 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 Student Book and online Teacher Resource.

- **Blackline masters (BLM)**

References are made to the blackline masters in the teaching suggestions provided for each student work page in the online Teacher Resource.

- **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, the 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.

- **Extra support pages**

Addition and subtraction facts, addition strategies, algorithms, measurement and space are reinforced.

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.



CONCEPT

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



ACTIVITY

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



FUN SPOT

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

INVESTIGATION



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



ICT

These activities involve the use of computers or other technology.

I'm on the top of each page.



Structure of the 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.

Textbook structure

Within the Year 3 **Contents** (pages vi to xi), we show related pages using these categories:

Chapter 1: Number and algebra

• Counting number • Place value • Rounding • Fractions • Patterns

Chapter 2: Operations and algebra

• Addition • Subtraction • Multiplication • Division • Mental strategies • Money • Problem solving

Chapter 3: Measurement

• Length • Area • Volume • Capacity • Mass • Telling the time • Duration • Problem solving

Chapter 4: Space

• 2D space • Angles, lines • Symmetry, turning • 3D space • Position, directions

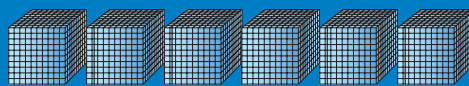
Chapter 5: Statistics and Probability

• Collecting data • Surveys • Creating data displays • Analysing data displays
• Chance language • Chance experiments

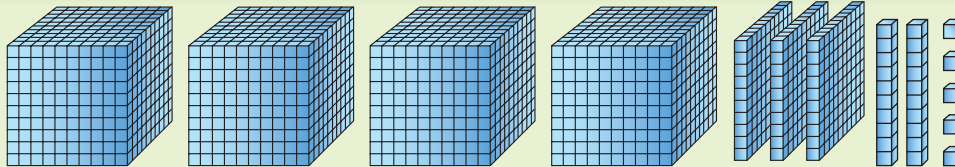
The **Cross-reference** (pages xii and xiii) give a clear indication of where syllabus content is addressed.

The **Suggested program** is provided in the Contents pages and aligns with the Mentals book, and Progress tests and Re-tests.

Each Mentals unit reviews the previous 2 weeks' content from the Student book suggested program.



4325



4 thousands 3 hundreds 2 tens 5 ones

four thousand, three hundred and twenty-five

This number has:

- 43 hundreds and 25 ones
- 432 tens and 5 ones

1 Fill out the numeral expander and write the numeral.

a

thousands hundreds tens ones

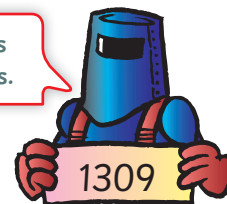
b

thousands hundreds tens ones

2 How many digits are there in each numeral?

- a 639 b 1256 c 3970 d 567

1309 has four digits.



3 Write these as numerals.

- a one thousand and forty b seven thousand and eighteen
- c five thousand, one hundred and seventy-nine d nine thousand and seven

4 Write in words:

- a 4023
- b 9030

5 Arrange these numbers in ascending order.

- a 6426, 6624, 6246
- b 8345, 8453, 8543

6 Arrange these numbers in descending order.

- a 8204, 8042, 8402
- b 2083, 8302, 8203

7 Does changing the order of the digits in a number change the size of the number?

8 a Write the largest number you can using the digits 5, 2, 8 and 4.

b Write the second largest number you can using the digits 5, 2, 8 and 4.

Ten thousands = 10000 = 10 x 1000 = 100 x 100 = 1000 x 10. There are 4 zeros in each.



We leave a space after the 1000s column for numbers with more than 4 digits.

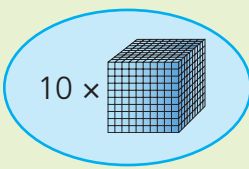
67 208
14 000



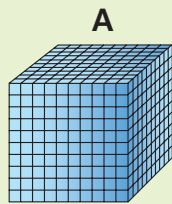
CONCEPT



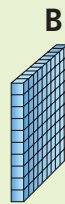
Each column has ten times the value of the one on its right.



10 ×
1 ten-thousand
10 000
10 × 1000



A
1 thousand
1000
10 × 100



B
1 hundred
100
10 × 10



C
1 ten
10
10 × 1

D



1 one
1
1

1 How many times as big is the number shown in:

- a **A**, compared to the one shown in **B**?
- b **B**, compared to the one shown in **C**?
- c **C**, compared to the one shown in **D**?
- d **A**, compared to the one shown in **C**?
- e **B**, compared to the one shown in **D**?
- f **A**, compared to the one shown in **D**?

92 thousand			5 hundred and sixty-one		
100 000	10 000	1 000	100	10	1
9	2		5	6	1

This place-value house shows 92 561.

When we multiply by 10 we add a zero. This changes the place value of the digits.

2 Which number is larger:

- a **A**: 60 000 + 7 000 + 600 + 80 + 1 or **B**: 60 000 + 900 + 90 + 9?
- b **C**: 80 000 + 1 000 + 200 + 40 + 9 or **D**: 80 000 + 2 000 + 100 + 60 + 2?
- c **E**: 20 000 + 5 000 + 700 + 10 + 8 or **F**: 20 000 + 5 000 + 800 + 80 + 1?
- d **G**: 50 000 + 3 000 + 900 + 90 + 2 or **H**: 50 000 + 9 000 + 700 + 90 + 2?

3 **A** 74 186 **B** 79 146 **C** 60 715 **D** 40 207 **E** 97 364 **F** 98 170

- a Which number has a 7 that stands for 7000?
- b Which numbers contain 6s that have the same value?
- c Which numbers contain 9s that have the same value?
- d Which numbers contain 7s that have the same value?
- e How many times as big is the 7 in **B** compared to the 7 in **E**?

What other questions could you ask?



Wipe out a digit

- A student enters any 5-digit number into a calculator.
- A partner selects any digit to be 'wiped out', i.e. changed to zero.
- Only one operation can be entered into the calculator to wipe out a digit.
- Take turns and score one point for each successful wipe out.

ICT





CONCEPT



3478 rounds off to 3000 (to the nearest 1000). 65 432 rounds off to 70 000 (to the nearest 10 000).



When rounding a number to a particular place, look at the next digit.
If it is 5 or more, round up.
If it is less than 5, round down.



This rounds off to 97 000.

1 Round off these numbers to the nearest hundred.

- | | | | | | | | |
|--------|----------------------|--------|----------------------|--------|----------------------|--------|----------------------|
| a 3674 | <input type="text"/> | b 4237 | <input type="text"/> | c 1396 | <input type="text"/> | d 9271 | <input type="text"/> |
| e 6549 | <input type="text"/> | f 6704 | <input type="text"/> | g 8962 | <input type="text"/> | h 5854 | <input type="text"/> |

2 Round off these numbers to the nearest thousand.

- | | | | | | | | |
|----------|----------------------|----------|----------------------|----------|----------------------|----------|----------------------|
| a 31 569 | <input type="text"/> | b 82 738 | <input type="text"/> | c 10 846 | <input type="text"/> | d 57 249 | <input type="text"/> |
| e 23 496 | <input type="text"/> | f 52 301 | <input type="text"/> | g 46 972 | <input type="text"/> | h 69 347 | <input type="text"/> |

3 Round off these numbers to the nearest ten-thousand.

- | | | | | | | | |
|----------|----------------------|----------|----------------------|----------|----------------------|----------|----------------------|
| a 46 867 | <input type="text"/> | b 82 999 | <input type="text"/> | c 25 000 | <input type="text"/> | d 88 235 | <input type="text"/> |
| e 92 675 | <input type="text"/> | f 33 951 | <input type="text"/> | g 65 007 | <input type="text"/> | h 74 000 | <input type="text"/> |

4 a Circle numbers that round off to 53 000.

- 53 640 52 967 52 849
52 621 52 076 53 297
53 599 53 346 52 374

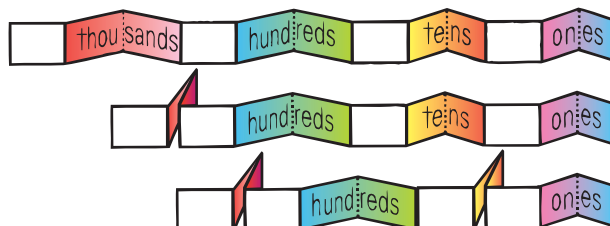
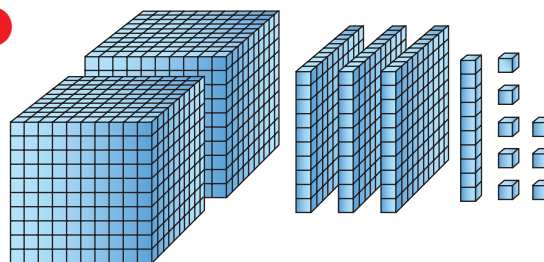
b Circle numbers that round off to 80 000.

- 79 621 87 231 81 119
85 000 74 649 75 000
83 713 71 998 76 014

5 Answer true or false for each statement.

- | | |
|--------------------------------|----------------------|
| a 4639 rounds off to 4600. | <input type="text"/> |
| b 1854 rounds off to 1800. | <input type="text"/> |
| c 6341 rounds off to 6400. | <input type="text"/> |
| d 9782 rounds off to 9800. | <input type="text"/> |
| e 35 000 rounds off to 40 000. | <input type="text"/> |

6





CONCEPT



This place-value house shows 73 000.

We can partition this in many ways.

$70\,000 + 3\,000$

or $60\,000 + 13\,000$

or 730 hundreds.

Thousands					
100 000	10 000	1 000	100	10	1
H	T	O	H	T	O
	7	3	0	0	0

1 Write these numbers in the place-value house then list different ways to partition them.

a 95 000

Thousands					
H	T	O	H	T	O

a 48 000

Thousands					
H	T	O	H	T	O

2 We can write 36 000 as 20 thousands and 16 thousands. Partition these numbers in the same way.

a 42 000

b 58 000

c 37 000

3 a $35\,000 = 30\,000 +$

$= 20\,000 +$

c $28\,000 = 20\,000 +$

$= 10\,000 +$

e $72\,500 = 70\,000 +$

$= 20\,000 +$

b $83\,000 = 80\,000 +$

$= 70\,000 +$

d $63\,000 = 60\,000 +$

$= 50\,000 +$

f $91\,300 = 90\,000 +$

$= 50\,000 +$

We can break up numbers in many ways.



4 Rearranging the digits changes the size of a number. Use the digits 6, 2, 7, 9, 2 to:

a Write the smallest number you can.

b Write the second smallest number you can.

c Write the second largest number you can.

Rearranging digits changes the size of the number.

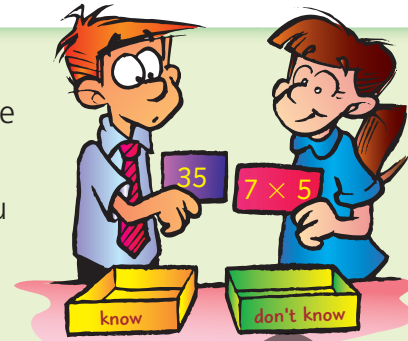


Step 1: Have someone test you.

Step 2: For each table you don't know, make a card with the question on one side and the answer on the other.

Step 3: Carry these cards with you, testing yourself until you know them.

Use these steps to learn your 1, 2, 3, 5 and 10 times tables.



CONCEPT

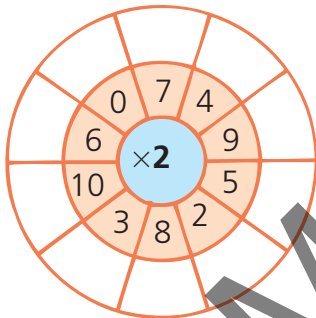


1 Use skip counting to complete.

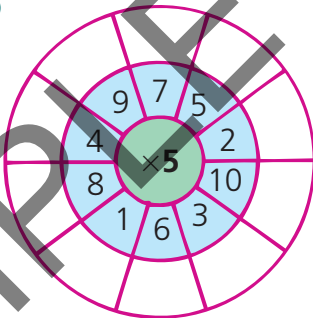
×	0	1	2	3	4	5	6	7	8	9	10
2											
3											
5											
10											

2 Complete these number wheels.

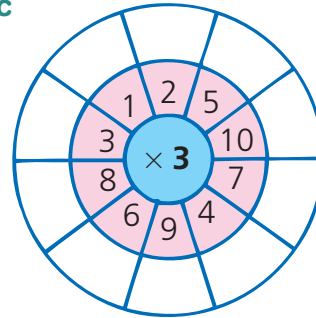
a



b



c



- 3
- | | | | |
|--|--|---|--|
| a | b | c | d |
| $\begin{array}{r} 1 \\ \times 4 \\ \hline \end{array}$ | $\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$ | $\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$ | $\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$ |
| e | f | g | h |
| $\begin{array}{r} 2 \\ \times 6 \\ \hline \end{array}$ | $\begin{array}{r} 1 \\ \times 8 \\ \hline \end{array}$ | $\begin{array}{r} 10 \\ \times 6 \\ \hline \end{array}$ | $\begin{array}{r} 2 \\ \times 7 \\ \hline \end{array}$ |

$$\begin{array}{r} 5 \\ \times 3 \\ \hline \square \end{array}$$

means

$$3 \times 5 = \square.$$

Multiplication cards

- Cards marked 1 to 10 are placed face down in a pile.
- One card is turned at a time. The first to correctly multiply the card by 5, keeps the card. The player with the most cards wins.





$\frac{5}{12}$ of this group of stars has been coloured.



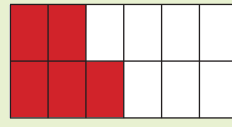
7 parts have not been coloured.

Numerator $\rightarrow \frac{5}{12}$ is 5 of 12 equal parts.
Denominator $\rightarrow \frac{5}{12}$

5 parts have been coloured.



Fractions are used in many ways. We can find fractions of a whole, a group or an object.



$\frac{5}{12}$



1 What part of each shape has been coloured?

a b c d
 e f g h

2 What part of each shape above has not been coloured?

a b c d e f g h

3 Colour part of each shape to match the given fraction.

a $\frac{4}{12}$ b $\frac{1}{6}$ c $\frac{1}{3}$ d $\frac{4}{6}$
 e $\frac{9}{12}$ f $\frac{5}{6}$ g $\frac{6}{12}$ h $\frac{10}{12}$

4 What part of each group has been coloured?

a b c
 d e f

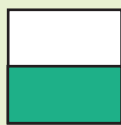
The part coloured is $\frac{7}{12}$.

5 What part of each group above has not been coloured?

a b c d e f



This is cut into two equal parts.



$\frac{1}{2}$



$\frac{1}{5}$

$\frac{1}{2}$ is bigger than $\frac{1}{5}$.



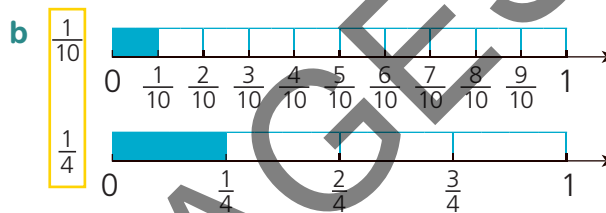
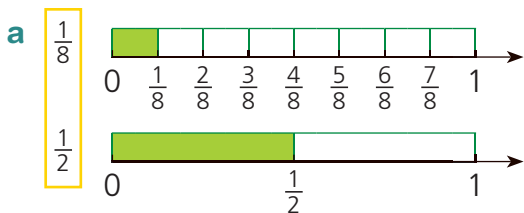
This is cut into five equal parts.



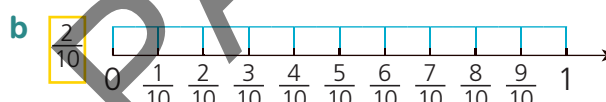
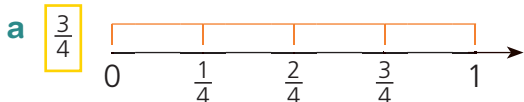
CONCEPT

We need to have equal wholes to compare fractional parts.

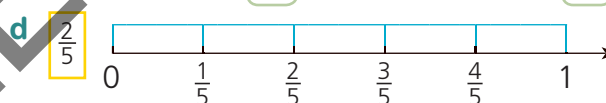
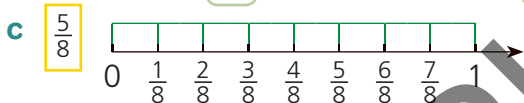
1 Circle the larger fraction. Discuss how the denominators affect the size of each unit fraction.



2 Colour part of each shape to match the given fraction.



Part coloured: Part not coloured: Part coloured: Part not coloured:

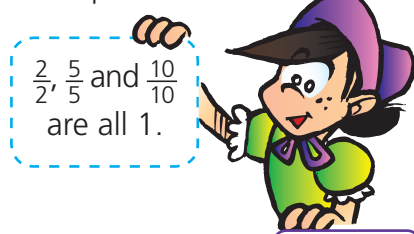


Part coloured: Part not coloured: Part coloured: Part not coloured:

Circle the fractions that are greater than one half.

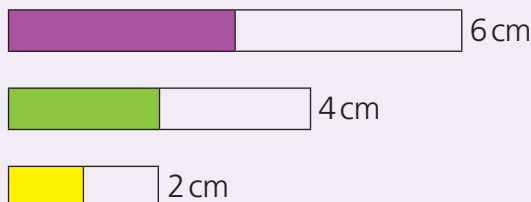
3 Write true or false for each statement. You could draw these fractions to compare them.

- a $\frac{2}{2} = 1$ b $\frac{4}{5} = 1$ c $\frac{8}{8} = 1$
 d $1 = \frac{10}{10}$ e $1 = \frac{3}{8}$ f $1 = \frac{5}{5}$



INVESTIGATION

- Ashton, Harry and Riley each coloured half of a strip of paper. Explain why each half was a different size.





analog

digital



Both of these clocks show
ten minutes past 4 or 4 ten.



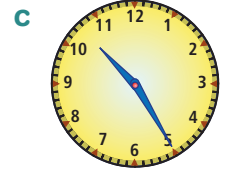
1 Complete each label.



12 :
 past 12



4 :
 past 4



10 :
 past 10



to



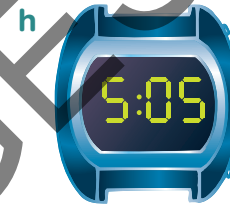
to



past



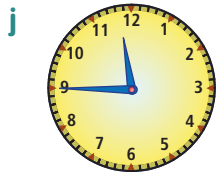
to



past



2 :
 to 3



11 :
 to 12



8 :
 to 9



3 :
 to 4



4 :
 to 5



past



to



to

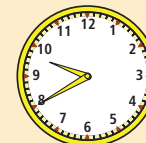


past



to

Join the clocks that
show the same time.



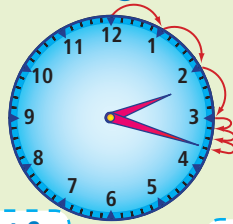
Digital time shows how many minutes past the hour.



Each little mark stands for one minute.



analog time



18 past 2

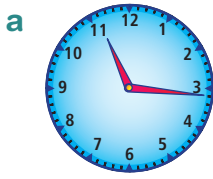
The time is 18 minutes past 2 or 2:18. We say the digital time as '2 eighteen'.

digital time

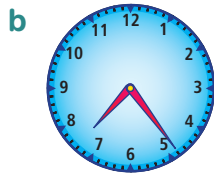


5, 10, 15 ... 16,17,18 minutes past 2.

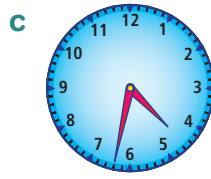
1 Complete the labels for each time shown.



11 :
 past



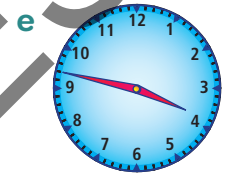
7 :
 past



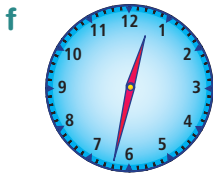
4 :
 to



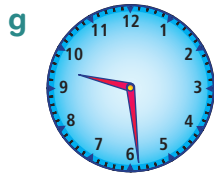
5 :
 past



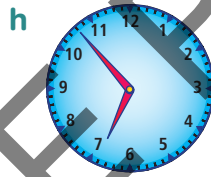
3 :
 to



12 :
 to



9 :
 past



6 :
 to



10 :
 past



8 :
 to



to



to



past



past



to

2 Write the time that is one minute before:

a 3:16

b 2:47

c 7:28

d 9:03

e 11:41

f 4:39

g 12:24

h 5:20

i 6:55

3 Write how many more minutes it would be to the next hour.

a 4:13

b 9:41

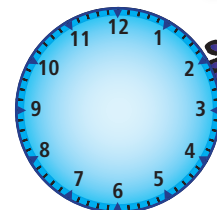
c 7:32

d 10:54

e 8:16

f 5:58

Use this clock to help you.







4:00 means 4 o'clock.
9:30 means 9 thirty.



digital





analog



17 past 5 or 5 seventeen

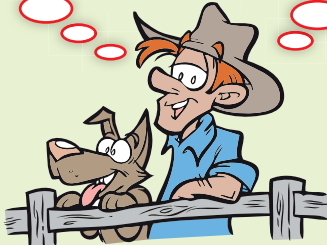
min is short for minutes.


5 forty-three or 17 to 6

5, 10, 15, 16, 17 minutes past.

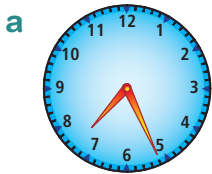
5, 10, 15, 16, 17 minutes to.



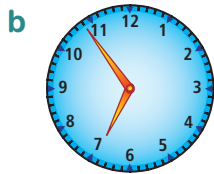
CONCEPT



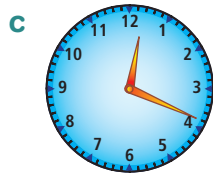
1 Complete the label for each time shown.



past



to



past



past



to

2 Complete the label for each time shown.



to



past



past



past



to

3 The race began at 10:25. I finished at 10:46. How long did I take? min

Ron, who was also in the race, finished at 11:00, how long did he take? min

The winner of the race finished the run at 10:39. By how much did he beat me? min

At 1:37, I walked back to school. It took me 9 minutes. When did I reach school?

Ron left at 1:37 and did not reach school until 2:00. How long did it take him? min

4 We left Griffith at 9:07 and arrived in Hillston at 10:00. How long did we take?

5 Jindi, Jedda and Maali walked from the waterhole to the river to meet their father's boat.

They left at 7:15 and arrived at 8:00. How long did it take them to reach the river? min

Their father's boat arrived 20 minutes after them. When did the boat arrive?



AUSTRALIAN
Signpost
MATHS

NSW

SAMPLE PAGES

STAGE 2

Mentals

4

Alan McSeveny

Rachel McSeveny

Diane McSeveny-Foster

Introduction

Using the Mentals Books

This book is used most effectively when it aligns with the suggested program in the Student book contents. Each unit of the Mentals Book is programmed to review Student Book content for the previous two weeks (based on the Suggested Program in the Teacher's Book). For example, Unit 15 of the Mentals Book can be set as homework to review weeks 13 and 14 of the Student Book while week 15 is being taught.

Mixed-topic questions

The units present questions in a mixed-topic format to encourage thorough understanding and continuous review.

Presentation

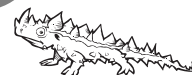
- Number facts are reinforced to encourage instant recall.
- Essential skills are explained.
- The Arithmetic card (page 5) is a useful teaching tool for practising basic number skills.
- ID cards (pages 6 and 7) review the mathematical terms students need to learn.
- Measurement standards and examples (pages 8 and 9) are provided so that students can learn important facts and estimate measurements effectively.

Graded questions

- Column 1: easier
- Columns 2 and 3: harder
- Column 4: Extension and Challenge

Motivation

- There are two lizards hidden on each page for students to find.
- The header allows students to record their score.



Extra Activities



- Problem-solving **strategies** are introduced in a carefully planned sequence throughout the series.



- Important concepts from **Number and algebra** and **Measurement and geometry** are explored.



- **Measurement** concepts and activities are introduced and investigated.



- **Statistics and probability** concepts (Data and chance) are presented for revision and extension.



- A **tables** program for each of the four operations is included.
- It is important for students to learn addition and multiplication tables by heart.





Arithmetic card	5	Units	10–83
ID cards	6–8	Tables of number and measurement	84
Examples of measurements	9	Answers A1–A12 (middle pages)	

Unit activities



Unit	Content	Extra Activity	Unit	Content	Extra Activity
1:1/2 1:3/4	+ 2, + 3, + 4 personal measures	+ tables Measure	20:1/2 20:3/4	Language Problem solving	ID card C Strategy time
2:1/2 2:3/4	– 2, – 4 + 5, + 10, + 6	– tables + tables	21:1/2 21:3/4	– 6, – 7 × 6, × 8	– tables × tables
3:1/2 3:3/4	Language + 8, + 9, + 7	ID card C + tables	22:1/2 22:3/4	Patterns Language	Concept ID card B
4:1/2 4:3/4	× 2, × 4 × 10, × 5	× tables × tables	23:1/2 23:3/4	× 6, × 8 × 7	× tables × tables
5:1/2 5:3/4	× 10, × 5 × 2, × 5, × 4, × 10, × 0, × 1	× tables × tables	24:1/2 24:3/4	Language × 7, × 8	ID card A × tables
6:1/2 6:3/4	+ 8, + 9, + 7 × 4	+ tables × tables	25:1/2 25:3/4	Time Time	Measure Measure
7:1/2 7:3/4	Fractions Area	Concept Measure	26:1/2 26:3/4	Language Roman numerals	ID card A Concept
8:1/2 8:3/4	Area Near doubling	Measure Concept	27:1/2 27:3/4	Time Roman numerals	Measure Concept
9:1/2 9:3/4	Place value Place value	Concept Concept	28:1/2 28:3/4	Division ÷ 2, ÷ 4	Concept ÷ tables
10:1/2 10:3/4	Chance Fractions	Chance Concept	29:1/2 29:3/4	Division North, south, east, west	Concept Concept
11:1/2 11:3/4	Chance – 5, – 10, – 4	Chance – tables	30:1/2 30:3/4	÷ 5, ÷ 10 × 6, × 7	÷ tables × tables
12:1/2 12:3/4	Flip, slide and turn Place value	Concept Concept	31:1/2 31:3/4	× 4, × 6, × 7, × 8, × 9 Division	× tables Concept
13:1/2 13:3/4	× 2, × 4, × 8, × 5, × 10 The jump strategy	× tables Strategy time	32:1/2 32:3/4	÷ linked with x Length	Concept Measure
14:1/2 14:3/4	Language × 4, × 8	ID card C × tables	33:1/2 33:3/4	× 6, × 9 Language	× tables ID card B
15:1/2 15:3/4	Addition linked to subtraction – 8, – 9	Concept – tables	34:1/2 34:3/4	÷ 3, ÷ 6 Rounding off money	÷ tables Concept
16:1/2 16:3/4	× 3, × 6 Finding change	× tables Concept	35:1/2 35:3/4	Crossnumber puzzle ÷ 5, ÷ 10	Concept ÷ tables
17:1/2 17:3/4	× 3, × 6 Chance	× tables Chance	36:1/2 36:3/4	Problem solving Rounding off money	Strategy time Concept
18:1/2 18:3/4	× 4, × 8 × 3, × 6	× tables × tables	37:1/2 37:3/4	Language Personal measures	ID card A Measure
19:1/2 19:3/4	× 9 × 9	× tables × tables	Answers	These can be found in the middle of this book on pages A1 to A12.	

Arithmetic card

	A	B	C	D	E	F	G	H	I	J
1	7	3	11	20	4	2	7	50	37	\$6
2	4	7	17	16	25	10	11	80	93	\$1
3	10	1	14	12	64	14	3	20	16	\$7
4	3	5	19	17	16	4	15	70	55	\$3
5	5	8	16	13	81	12	19	40	100	\$8
6	8	6	12	18	1	16	1	60	71	\$5
7	2	10	18	11	36	8	9	100	48	\$9
8	6	4	15	14	9	20	17	30	82	\$2
9	1	9	20	19	100	18	5	90	64	\$10
10	9	2	13	15	49	6	13	10	29	\$4



How to use this card

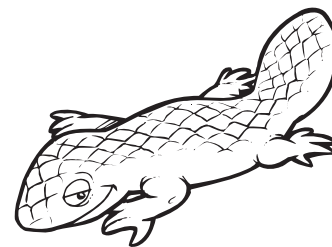
If students were told to "subtract B from C", they would write:

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

Other instructions might be:

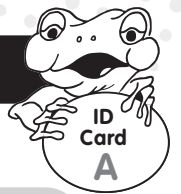
- Multiply column B by 4.
- Add columns A and C.
- Halve column F.
- What multiplied by 10 gives column H?
- What is the change from \$10 if I spent what it is in column J?
- Double column G.
- Subtract column B from column H.
- What must be added to column I to make 100?
- Multiply column A by 5.

The applications of this card are endless.



ID card A

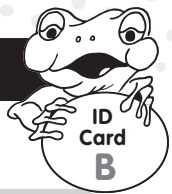
Do not write on this card.



<p>1</p> <p>m</p> <p>stands for</p> <p>m _____</p>	<p>2</p> <p>cm</p> <p>stands for</p> <p>c _____</p>	<p>3</p> <p>mm</p> <p>stands for</p> <p>m _____</p>	<p>4</p> <p>1 square m _____</p>	<p>5</p> <p>1 square c _____</p>												
<p>6</p> <p>L</p> <p>stands for</p> <p>l _____</p>	<p>7</p> <p>mL</p> <p>stands for s</p> <p>m _____</p>	<p>8</p> <p>kg</p> <p>stands for</p> <p>k _____</p>	<p>9</p> <p>g</p> <p>stands for</p> <p>g _____</p>	<p>10</p> <p>h or hr</p> <p>stands for</p>												
<p>11</p> <p>min</p> <p>stands for</p> <p>m _____</p>	<p>12</p> <p>s</p> <p>stands for</p> <p>s _____</p>	<p>13</p> <p>°C</p> <p>means</p> <p>d _____</p> <p>c _____</p>	<p>14</p> <p>0°C</p> <p>is the f _____</p> <p>p _____ of w _____</p>	<p>15</p> <p>100°C</p> <p>is the b _____</p> <p>p _____ of w _____</p>												
<p>16</p> <p>am</p> <p>means</p> <p>b _____ n _____</p>	<p>17</p> <p>pm</p> <p>means</p> <p>a _____ n _____</p>	<p>18</p> <p>d _____ watch</p>	<p>19</p> <p>a _____ clock</p>	<p>20</p> <p>5 groups of 7</p> <p>means</p> <p>5 _____ 7</p>												
<p>21</p> <p>Share 20 among 5.</p> <p>means</p> <p>20 _____ 5</p>	<p>22</p> <p>How many groups of 6 in 18?</p> <p>means</p> <p>18 _____ 6</p>	<p>23</p> <p>1, 2, 3, ...</p> <p>are the</p> <p>c _____</p> <p>numbers</p>	<p>24</p> <p>2, 4, 6, ...</p> <p>are the</p> <p>e _____</p> <p>numbers</p>	<p>25</p> <p>1, 3, 5, ...</p> <p>are the</p> <p>o _____</p> <p>numbers</p>												
<p>26</p> <p>1st, 2nd, ...</p> <p>are the</p> <p>o _____</p> <p>numbers</p>	<p>27</p> <p>493 872</p> <p>has 6</p> <p>_____</p>	<p>28</p> <p>Balls Lost</p> <table border="1"> <tr> <td>May</td> <td>●●●</td> </tr> <tr> <td>June</td> <td>●●●●</td> </tr> <tr> <td>July</td> <td>●●●●●</td> </tr> </table> <p>● stands for one ball.</p> <p>p _____ graph</p>	May	●●●	June	●●●●	July	●●●●●	<p>29</p> <p>Car Colour</p> <table border="1"> <tr> <td>Red</td> <td> </td> </tr> <tr> <td>Blue</td> <td>### </td> </tr> <tr> <td>Green</td> <td>### ###</td> </tr> </table> <p>This is a t _____.</p>	Red		Blue	###	Green	### ###	<p>30</p> <p>Colour of Dress</p> <p>A B C</p> <p>c _____ graph</p>
May	●●●															
June	●●●●															
July	●●●●●															
Red																
Blue	###															
Green	### ###															

See page A1 for answers.





ID card B

Do not write on this card.

1



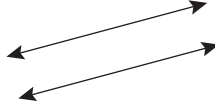
h _____
line

2



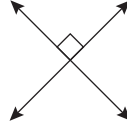
v _____
line

3



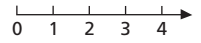
p _____ lines

4



p _____ lines

5



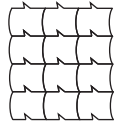
n _____
line

6



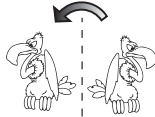
a _____ of

7



t _____

8



f _____
or r _____

9



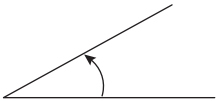
slide
or r _____

10



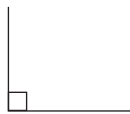
t _____
or r _____

11



a _____ angle

12



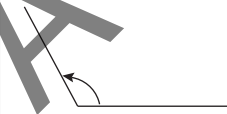
r _____ angle

13



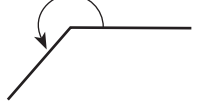
s _____
angle

14



o _____ angle

15



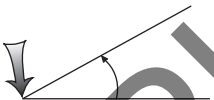
r _____
angle

16



r _____

17



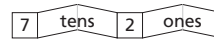
v _____ of an angle

18



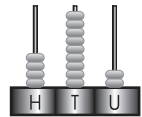
a _____ of an angle

19



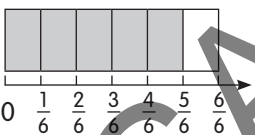
is a n _____
expander

20



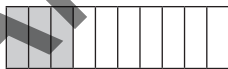
a _____

21



_____ sixths shaded

22 $\frac{3}{10}$ or 0.3



_____ tenths shaded

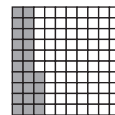
23

54.39

_____ tens
_____ ones
_____ tenths
_____ hundredths

24

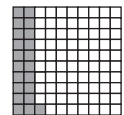
0.24



_____ hundredths
shaded

25

0.24



0. _____ shaded

26

0.5

↑
decimal

p _____

27

February						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

c _____

28



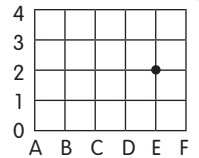
c _____

29



m _____ ruler

30



The c _____
of the dot are E2.

See page A1 for answers.



ID card C

Do not write on this card.



1 o _____	2 t _____	3 s _____	4 r _____	5 r _____
6 t _____	7 p _____	8 q _____	9 p _____	10 h _____
11 o _____	12 k _____	13 r _____ shapes	14 i _____ shapes	15 d _____
16 f _____	17 c _____ v _____	18 e _____	19 b _____	20 f _____ surface
21 c _____ surface	22 s _____	23 c _____	24 c _____	25 c _____
26 p _____	27 p _____	28 n _____ of a cube	29 net of a s _____ p _____	30 net of a f _____ p _____



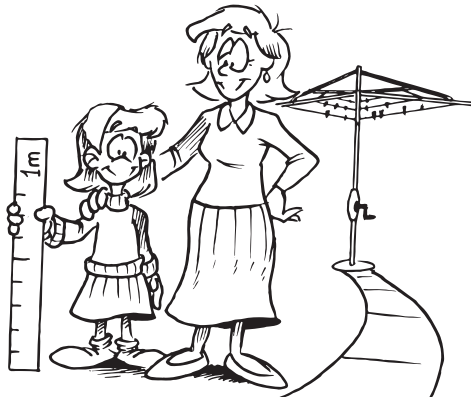
See page A1 for answers.

Examples of measurements

1



2



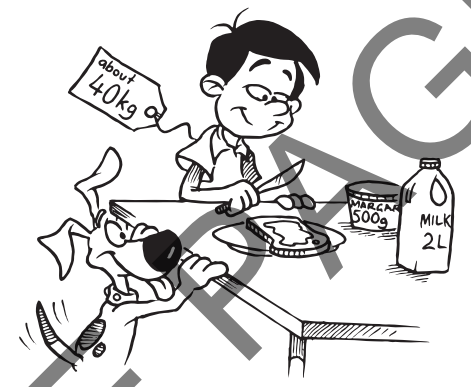
- 1 ■ The **width of the boy's finger** is about **1 cm**.
- The **length of a place-value tens block** is **10 cm**.

3



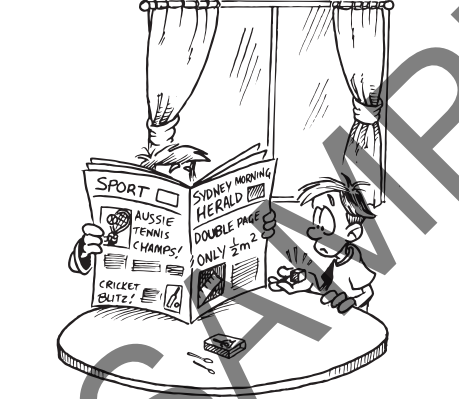
- 2 ■ The **height of the girl** is a little more than **1 m**.
- 3 ■ The **container of milk** holds **2 L**.
- The **can of Fizz** holds **375 mL**.
- The **teaspoon** holds **5 mL**.

4



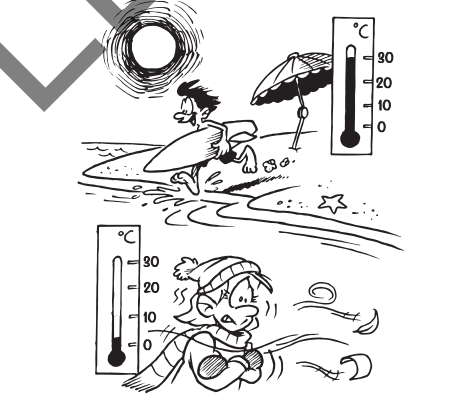
- 4 ■ The **boy** has a mass of **40 kg**.
- The **margarine** has a mass of **500 g**.

5



- 5 ■ The **area of the window** is about **2 m²**.
- The **top of a place-value ones block** is **1 cm²**.

6



- 6 ■ **30°C** is a **hot** day.
- **3°C** is a very **cold** day.

Use the pictures above to estimate the answers to these questions.

- 1 a How high is the glass?
b How wide is the table?
- 2 a How wide is the clothes line?
b How tall is the woman?
- 3 a How much will the bucket hold?
b How much will the cup hold?

- 4 a What is the mass of the dog?
b What is the mass of 2 L of milk?
- 5 a What is the area of the table?
b What is the area of the top of a matchbox?
- 6 a What is the temperature on a very hot day?
b What is the temperature on a cool day?



1:1

out of 19

- 1 $2 + 3$ _____
- 2 7×2 _____
- 3 $57 - 10$ _____
- 4 3×5 _____
- 5 $\begin{array}{r} 54 \\ + 35 \end{array}$
- 6 12 less than 34 _____
- 7 Half of 22. _____
- 8 $35 + 10$ _____
- 9 $43 + 7$ _____
- 10 $\begin{array}{r} 23 \\ + 61 \end{array}$

11 $2000 + 900 + 20 + 6$

12 $\frac{1}{10}, \frac{2}{10}, \frac{3}{10}$, , , ,

13 Circle the largest number.
6716 6793 6912

14 If $36 + 7 = 43$, then $136 + 7 =$ _____

15 Colour the change I would get from 50 cents when I spend 35 cents.



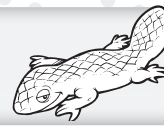
16 Which of the terms *impossible*, *unlikely*, *likely* or *certain* describes the chance of you finding \$20 tomorrow? _____

17 The ordinal number after:
a 17th _____ b 20th _____

18 What season is made up of June, July and August? _____

19 The difference between 35 and 45 is _____.

1:2



out of 15

- 1 $20 + 13$ _____
- 2 5×4 _____
- 3 $36 - 19$ _____
- 4 $58 - 19$ _____
- 5 $\begin{array}{r} 46 \\ + 33 \end{array}$
- 6 $13 + \underline{\quad} = 20$
- 7 $5 + \underline{\quad} = 20$
- 8 $647 - 8$ _____
- 9 $522 - 6$ _____
- 10 $\begin{array}{r} 34 \\ + 42 \end{array}$

11 How many days in spring? _____

12 Use the jump strategy to find:
 $36 + 29 =$ _____



13 The difference between 40 and 57 is _____.

14 What date is the:
a second Saturday?

DECEMBER						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

b fourth Monday?

15 Write these numbers on the place-value chart.

- a 6393
- b 8075
- c 7514

	Thousands	Hundreds	Tens	Ones
a				
b				
c				



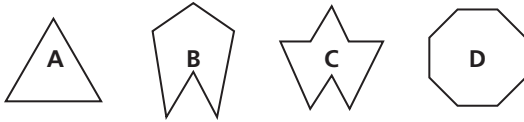
Three ten-frame puzzles for addition. Each puzzle has a central box with a plus sign and a number, and ten surrounding boxes for digits.

- Puzzle 1: Central box contains $+ 2$. Digits in the ten frames are 0, 4, 7, 8, 2, 5, 6, 9, 3, 10.
- Puzzle 2: Central box contains $+ 3$. Digits in the ten frames are 8, 0, 3, 5, 9, 6, 2, 4, 10, 7.
- Puzzle 3: Central box contains $+ 4$. Digits in the ten frames are 8, 0, 3, 5, 9, 6, 2, 4, 10, 7.

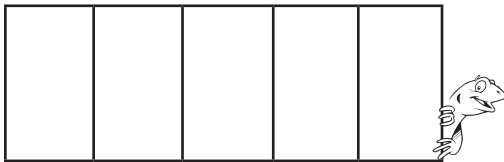
1:3

out of 8

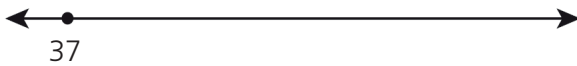
1 The irregular shapes are: _____



2 Colour 3 fifths of this shape.



3 Use the jump strategy to find $37 + 25$. _____



4 Colour the change you would get from \$2 when you spend \$1.35 cents.



5 Sarah drew 4 monsters. She gave each 5 legs. How many legs were there altogether? _____

6 Bridge to the next ten to find:
 a $57 + 8$ _____ b $36 + 7$ _____
 c $69 + 9$ _____ d $35 + 8$ _____

7 This is the net of a _____

8 How many digits in 846901 _____

1:4

out of 6

1 a How many 50c coins make \$2? _____
 b How many 20c coins make \$2? _____
 c How many 10c coins make \$2? _____
 d How many 5c coins make \$2? _____

2 $10 + 11 + 12 + 13 + 14$ _____

3 Jane and I collected cards. She collected 35 more than me. If I collected 145 cards, how many cards do we have altogether? _____

4 Jonkey hit 35 golf balls and Scott hit 6 less. How many did they hit altogether? _____

5 represents 14.
 represents 24.

What is represented by:



6 I have 12 stickers. How many people could I give:
 a 4 stickers? _____ b 6 stickers? _____

Challenge

Write what you know about the number 426 930.



Fill out this table about yourself, a relative or a friend.

Name: _____

Date: _____



Age: _____	Mass: _____ kg	Shoe size: _____
Height: _____ cm	Waist: _____ cm	Neck size: _____ cm



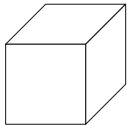
2:1

out of 18

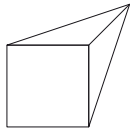
- 1 $20 + 25$ _____
- 2 $50 - 30$ _____
- 3 $40 + 37$ _____
- 4 $60 - 26$ _____
- 5
$$\begin{array}{r} 53 \\ + 32 \\ \hline \end{array}$$
- 6 8 less than 100 _____
- 7 8 groups of 10 _____
- 8 $14 + \underline{\quad} = 20$
- 9 $12 + \underline{\quad} = 30$
- 10
$$\begin{array}{r} 75 \\ - 42 \\ \hline \end{array}$$

- 11 Name each shape and write the number of faces.

a



b



- 12 The time shown on the clock is _____ minutes to _____.



- 13 I get \$5 pocket money each week. How much will I get in 4 weeks? _____
- 14 a 53, 63, 73, _____, _____, _____
- b 35, 40, 45, _____, _____, _____
- c 530, 540, 550, _____, _____, _____
- d 28, 26, 24, _____, _____, _____
- 15 Is 8520 larger than 8509? _____
- 16 $2000 + 200 + 40 + 2$ _____
- 17 I walked along a 5 m balance beam 3 times. How far did I walk? _____
- 18 The number before 6723 is _____.

2:2

out of 17

- 1 $42 + 36$ _____
- 2 $83 - 21$ _____
- 3 $28 + 51$ _____
- 4 $70 - 22$ _____
- 5
$$\begin{array}{r} 34 \\ + 34 \\ \hline \end{array}$$
- 6 19 subtract 12. _____
- 7 27 minus 15. _____
- 8 12 shared by 3 _____
- 9 70 divided by 10 _____
- 10
$$\begin{array}{r} 64 \\ + 23 \\ \hline \end{array}$$

- 11 How many lines of symmetry are on a:

a regular pentagon? _____

b rectangle? _____

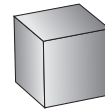


12

A

B

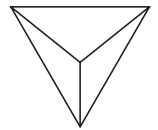
C



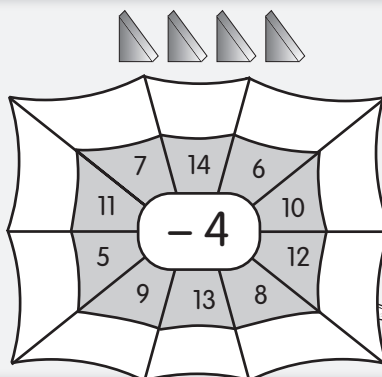
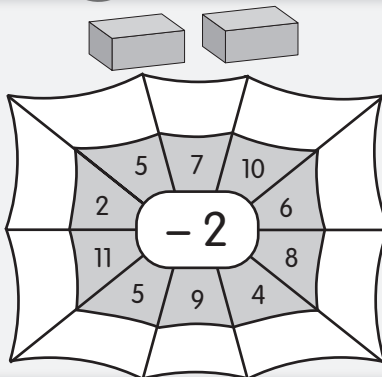
a Which object has corners? _____

b What is shape C? _____

- 13 This is a _____.
- It has _____ faces, _____ edges and _____ corners.
- The cross-section is a _____.



- 14 Is the height of your mother more than 2 metres? _____
- 15 8 days after Wednesday is _____.
- 16 The 9th month of the year is _____.
- 17 $13 + 17 + 12 + 8$ _____



even - even = _____

odd - even = _____



2:3

out of 10

- Round 4583 to the nearest 1000. _____
- I had 34 balls and lost some. How many did I lose if I have 18 left? _____
- Write the numeral for seven thousand, 4 hundred and seventeen. _____
- Describe this rectangle and write the area



_____ rows of _____ = _____

Area = _____ square centimeters

- Jake is now 18 years old.
 - How old will he be in 45 years? _____
 - How old was he 12 years ago? _____
- What is the time ten minutes after:
 - quarter to 4? _____
 - 27 minutes to 7? _____
- Give a rule for this pattern.
20, 40, 60, 80, 100,
- The number before 6493. _____
- Cross out the mistake in the pattern.



- Write in short form.
 - 60 grams _____
 - 64 kilograms _____

2:4

out of 9

- $100 - 15 - 15 - 15 - 15 - 15$ _____
- I own 43 stickers. This is 8 more than Rhonda owns. How many do we own altogether? _____
- In a volleyball game, each team has 6 players on the court. How many players would be in 10 games altogether? _____
- $25 + 35 + 45 + 55$ _____
- $90 - 25 - 25 - 25$ _____
- What is the time 35 minutes after:
 - 5:35? _____
 - 8:52? _____
- How many weeks in 3 years? _____
- 207 more than 198 is _____.
- The date today is May 14 and my birthday is May 30.
On what day will my birthday be if it is Sunday today? _____



Challenge

Write questions that are equal to:

- | | | |
|-------------|-------------|----------------|
| a $34 - 12$ | b $35 + 38$ | c 5×8 |
| = _____ | = _____ | = _____ |
| = _____ | = _____ | = _____ |
| = _____ | = _____ | = _____ |
| = _____ | = _____ | = _____ |

