

AUSTRALIAN
Signpost
MATHS



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4

Australian Signpost Maths 4 (AC V9.0) Suggested Program

Term 1

| Week - Program | Page | Unit | Title | Strand | Curriculum Code/s | Curriculum sub-elements |
|----------------|----------------|------|--------------------------------------|------------------------|----------------------|---|
| Week 1 | Mentals unit 1 | | | | | |
| Week 2 | Mentals unit 2 | | | | | |
| Week 3 | 1 | 1:01 | Numbers to 10 000 | Number and algebra | AC9M4N01 | Number and place value |
| Week 3 | 2 | 1:02 | Numbers to 10 000 | Number and algebra | AC9M4N01 | Number and place value |
| Week 3 | 3 | 1:03 | Rounding off | Number and algebra | AC9M4N01 | Number and place value |
| Week 3 | 22 | 2:01 | Number patterns | Operations and algebra | AC9M4N09 | Number patterns and algebraic thinking |
| Week 3 | 23 | 2:02 | Multiplication tables revision | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 3 | 24 | 2:03 | x 4 tables | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 4 | 4 | 1:04 | Fractions | Number and algebra | AC9M4N04 | Interpreting fractions |
| Week 4 | 5 | 1:05 | Comparing fractions | Number and algebra | AC9M4N04 | Interpreting fractions |
| Week 4 | 81 | 3:01 | Analog time | Measurement | AC9M4M01 AC9M4M03 | Measuring time |
| Week 4 | 82 | 3:02 | Analog and digital time | Measurement | AC9M4M01 AC9M4M03 | Measuring time |
| Week 4 | 83 | 3:03 | Analog and digital time | Measurement | AC9M4M01 AC9M4M03 | Measuring time |
| Week 5 | 25 | 2:04 | Times tables review | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 5 | 84 | 3:04 | Using a ruler | Measurement | AC9M4M01 | Understanding units of measurement (Length) |
| Week 5 | 85 | 3:05 | Centimetres and millimetres | Measurement | AC9M4M01 | Understanding units of measurement (Length) |
| Week 5 | 86 | 3:06 | Using millimetres | Measurement | AC9M4M01 | Understanding units of measurement (Length) |
| Week 6 | 6 | 1:06 | Improper fractions | Number and algebra | AC9M4N04 | Interpreting fractions |
| Week 6 | 7 | 1:07 | Mixed numbers | Number and algebra | AC9M4N04 | Interpreting fractions |
| Week 6 | 87 | 3:07 | Square centimetres | Measurement | AC9M4M02 | Understanding units of measurement (Area) |
| Week 6 | 88 | 3:08 | The square centimetre | Measurement | AC9M4M02 | Understanding units of measurement (Area) |
| Week 6 | 89 | 3:09 | The square centimetre | Measurement | AC9M4M02 | Understanding units of measurement (Area) |
| Week 7 | 26 | 2:05 | Addition, no trading | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 7 | 27 | 2:06 | Addition and subtraction, no trading | Operations and algebra | AC9M4N06 AC9M4N08 | Additive strategies, Understanding money |
| Week 7 | 118 | 4:01 | Flip, slide and turn | Space | AC9M4SP03 | Understanding geometric properties (2D space) |

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Term 1 cont.

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|---------|-----|------|-----------------------------|------------------------|----------------------|--|
| Week 7 | 119 | 4:02 | Angles and 2D shapes | Space | AC9M4M04 | Understanding geometric properties (Angles, 2D space) |
| Week 7 | 120 | 4:03 | Comparing angles | Space | AC9M4M04 | Understanding geometric properties (Angles) |
| Week 8 | 8 | 1:08 | Large numbers | Number and algebra | AC9M4N01 | Number and place value, Counting processes |
| Week 8 | 9 | 1:09 | Hundreds of thousands | Number and algebra | AC9M4N01 | Number and place value, Counting processes |
| Week 8 | 28 | 2:07 | Addition to 99 with trading | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 8 | 29 | 2:08 | Addition to 99 with trading | Operations and algebra | AC9M4N06 AC9M4N08 | Additive strategies, Understanding money |
| Week 8 | 144 | 5:01 | Drawing tables | Statistics | AC9M4ST01 | Interpreting and representing data |
| Week 9 | 10 | 1:10 | Fraction patterns | Number and algebra | AC9M4N04 | Interpreting fractions |
| Week 9 | 11 | 1:11 | Equivalent fractions | Number and algebra | AC9M4N03 | Interpreting fractions |
| Week 9 | 12 | 1:12 | Equivalent fractions | Number and algebra | AC9M4N03 | Interpreting fractions, Number patterns and algebraic thinking |
| Week 9 | 145 | 5:02 | Chance | Probability | AC9M4P01 AC9M4P02 | Understanding chance |
| Week 9 | 146 | 5:03 | Chance | Probability | AC9M4P01 | Understanding chance |
| Week 10 | 90 | 3:10 | Temperature | Measurement | AC9M4M01 | Understanding units of measurement (Temperature) |
| Week 10 | 91 | 3:11 | Recording temperature | Measurement | AC9M4M01 | Understanding units of measurement (Temperature) |

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Term 2

| Week - Program | Page | Unit | Title | Strand | Curriculum Code/s | Curriculum sub-elements |
|----------------|------|------|------------------------------|------------------------|----------------------|---|
| Week 11 | 13 | 1:13 | Numbers using millions | Number and algebra | AC9M4N01 | Number and place value, Counting processes |
| Week 11 | 14 | 1:14 | Rounding off | Number and algebra | AC9M4N01 | Number and place value |
| Week 11 | 30 | 2:09 | Jump strategy, + | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 11 | 31 | 2:10 | Jump strategy, – | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 12 | 15 | 1:15 | Hundredths | Number and algebra | AC9M4N01 | Interpreting fractions |
| Week 12 | 16 | 1:16 | Decimals | Number and algebra | AC9M4N01 AC9M4N03 | Number and place value |
| Week 12 | 32 | 2:11 | x 8 tables | Operations and algebra | AC9M4N06 | Multiplicative strategies |
| Week 12 | 33 | 2:12 | x 8 tables | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 13 | 17 | 1:17 | Tenths | Number and algebra | AC9M4N01 AC9M4N03 | Interpreting fractions |
| Week 13 | 18 | 1:18 | Comparing decimals | Number and algebra | AC9M4N01 | Number and place value |
| Week 13 | 121 | 4:04 | 3D objects | Space | AC9M4SP01 | Understanding geometric properties (3D space) |
| Week 13 | 122 | 4:05 | Prisms and pyramids | Space | AC9M4SP01 | Understanding geometric properties (3D space) |
| Week 14 | 19 | 1:19 | Place value in decimals | Number and algebra | AC9M4N01 | Number and place value |
| Week 14 | 20 | 1:20 | Place value to hundredths | Number and algebra | AC9M4N01 | Number and place value |
| Week 14 | 21 | 1:21 | Reading and writing decimals | Number and algebra | AC9M4N01 | Number and place value |
| Week 14 | 123 | 4:06 | Faces of prisms and pyramids | Space | AC9M4SP01 | Understanding geometric properties (3D space) |
| Week 14 | 124 | 4:07 | Prisms and pyramids | Space | AC9M4SP01 | Understanding geometric properties (3D space) |
| Week 15 | 34 | 2:13 | Addition, trading 2 tens | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 15 | 35 | 2:14 | Addition involving hundreds | Operations and algebra | AC9M4N06 AC9M4N07 | Additive strategies |
| Week 15 | 36 | 2:15 | Addition problems to 99 | Operations and algebra | AC9M4N08 | Additive strategies, Understanding money |
| Week 15 | 147 | 5:04 | Using graphs | Statistics | AC9M4ST02 | Interpreting and representing data |
| Week 15 | 148 | 5:05 | Reading graphs | Statistics | AC9M4ST02 | Interpreting and representing data |
| Week 16 | 37 | 2:16 | x 3, x 6 tables | Operations and algebra | AC9M4N06 | Multiplicative strategies |
| Week 16 | 38 | 2:17 | x 3 and x 6 tables | Operations and algebra | AC9M4A02 | Multiplicative strategies, Number patterns and algebraic thinking |
| Week 16 | 92 | 3:12 | Using millilitres | Measurement | AC9M4M01 | Understanding units of measurement (Capacity) |

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Term 2 cont.

| | | | | | | |
|---------|-----|------|----------------------------------|------------------------|----------------------|---|
| Week 16 | 93 | 3:13 | Using millilitres | Measurement | AC9M4M01 | Understanding units of measurement (Capacity) |
| Week 16 | 94 | 3:14 | Using L and mL | Measurement | AC9M4M01 | Understanding units of measurement (Capacity) |
| Week 17 | 39 | 2:18 | Subtraction with trading | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 17 | 40 | 2:19 | Subtraction from tens | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 17 | 41 | 2:20 | Subtraction with trading | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 17 | 125 | 4:08 | Drawing angles | Space | AC9M4M04 | Understanding geometric properties (Angles) |
| Week 17 | 126 | 4:09 | Angles at quarter and half turns | Space | AC9M4M04 | Understanding geometric properties (Angles) |
| Week 18 | 42 | 2:21 | x 9 tables | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 18 | 43 | 2:22 | x 9 tables | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 18 | 127 | 4:10 | Investigating polygons | Space | AC9M4SP03 | Understanding geometric properties (2D space) |
| Week 18 | 128 | 4:11 | Visualising shapes | Space | AC9M4SP03 | Understanding geometric properties (2D space) |
| Week 19 | 44 | 2:23 | Addition to 999 | Operations and algebra | AC9M4N06 AC9M4N07 | Additive strategies |
| Week 19 | 45 | 2:24 | Addition to 999 | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 19 | 46 | 2:25 | Writing algorithms | Operations and algebra | AC9M4N06 AC9M4N08 | Additive strategies |
| Week 19 | 129 | 4:12 | Maps | Space | AC9M4SP02 | Positioning and locating |
| Week 19 | 130 | 4:13 | Creating a map | Space | AC9M4SP02 | Positioning and locating |
| Week 20 | 149 | 5:06 | Ordering events | Probability | AC9M4P01 | Understanding chance |
| Week 20 | 150 | 5:07 | Chance used in games | Probability | AC9M4P01 | Understanding chance |

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Term 3

| Week - Program | Page | Unit | Title | Strand | Curriculum Code/s | Curriculum sub-elements |
|----------------|------|------|------------------------------------|------------------------|----------------------|---|
| Week 21 | 47 | 2:26 | What's the rule? | Operations and algebra | AC9M4N09 | Number patterns and algebraic thinking, Additive strategies |
| Week 21 | 48 | 2:27 | Number patterns | Operations and algebra | AC9M4N09 | Number patterns and algebraic thinking |
| Week 21 | 131 | 4:14 | Cones, cylinders and spheres | Space | AC9M4SP01 | Understanding geometric properties (3D space) |
| Week 21 | 132 | 4:15 | Views of 3D objects | Space | AC9M4SP03 | Understanding geometric properties (3D space) |
| Week 22 | 49 | 2:28 | x 7 tables | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 22 | 50 | 2:29 | x 7 tables | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 22 | 51 | 2:30 | Multiplication tables review | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 22 | 95 | 3:15 | Measuring mass | Measurement | AC9M4M01 | Understanding units of measurement (Mass) |
| Week 22 | 96 | 3:16 | Using grams | Measurement | AC9M4M01 | Understanding units of measurement (Mass) |
| Week 23 | 52 | 2:31 | Subtraction without trading to 999 | Operations and algebra | AC9M4N06 AC9M4N07 | Additive strategies, Understanding money |
| Week 23 | 53 | 2:32 | Subtraction with trading to 999 | Operations and algebra | AC9M4N06 AC9M4N07 | Additive strategies, Understanding money |
| Week 23 | 97 | 3:17 | Telling time | Measurement | AC9M4M01 | Measuring time |
| Week 23 | 98 | 3:18 | Time | Measurement | AC9M4M01 AC9M4M03 | Measuring time |
| Week 23 | 99 | 3:19 | am and pm time | Measurement | AC9M4M01 AC9M4M03 | Measuring time |
| Week 24 | 54 | 2:33 | Subtraction with trading to 999 | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 24 | 55 | 2:34 | Subtraction with 2 trades to 999 | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 24 | 100 | 3:20 | Recording length | Measurement | AC9M4M01 | Understanding units of measurement (Length) |
| Week 24 | 101 | 3:21 | Comparing measurements | Measurement | AC9M4M01 | Understanding units of measurement |
| Week 24 | 102 | 3:22 | Using measurement scales | Measurement | AC9M4M01 | Understanding units of measurement |
| Week 25 | 56 | 2:35 | Mental strategies, + and – | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 25 | 57 | 2:36 | Mental strategies, + and – | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 25 | 103 | 3:23 | Recording length | Measurement | AC9M4M01 | Understanding units of measurement (Length) |

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Term 3 cont.

| | | | | | | |
|---------|-----|------|------------------------------------|------------------------|----------------------------------|--|
| Week 25 | 104 | 3:24 | The square metre | Measurement | AC9M4M02 | Understanding units of measurement (Area) |
| Week 25 | 105 | 3:25 | The square metre | Measurement | AC9M4M02 | Understanding units of measurement (Area) |
| Week 26 | 58 | 2:37 | Subtraction from hundreds | Operations and algebra | AC9M4N06 AC9M4N07 AC9M4N08 | Additive strategies, Number patterns and algebraic thinking, Understanding money |
| Week 26 | 59 | 2:38 | Subtraction from hundreds strategy | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 26 | 133 | 4:16 | Compass directions | Space | AC9M4SP02 | Positioning and locating |
| Week 26 | 134 | 4:17 | Compass directions | Space | AC9M4SP02 | Positioning and locating |
| Week 26 | 152 | 5:08 | Tally marks | Statistics | AC9M4ST01 AC9M4ST02 | Interpreting and representing data |
| Week 27 | 60 | 2:39 | Division as repeated subtraction | Operations and algebra | AC9M4N06 | Multiplicative strategies |
| Week 27 | 61 | 2:40 | Understanding division | Operations and algebra | AC9M4N06 | Multiplicative strategies |
| Week 27 | 135 | 4:18 | Describing position | Space | AC9M4SP02 | Positioning and locating |
| Week 27 | 136 | 4:19 | Using position in maps | Space | AC9M4SP02 | Positioning and locating |
| Week 27 | 152 | 5:09 | Collecting information | Statistics | AC9M4ST03 | Interpreting and representing data |
| Week 28 | 62 | 2:41 | Division facts | Operations and algebra | AC9M4A02 AC9M4N08 | Multiplicative strategies |
| Week 28 | 63 | 2:42 | Division facts | Operations and algebra | AC9M4A02 | Multiplicative strategies |
| Week 28 | 106 | 3:26 | Timelines | Measurement | AC9M4M03 | Measuring time |
| Week 28 | 107 | 3:27 | Timetables | Measurement | AC9M4M03 | Measuring time |
| Week 29 | 64 | 2:43 | Odd and even numbers | Operations and algebra | AC9M4N02 | Number and place value |
| Week 29 | 65 | 2:44 | Odd and even | Operations and algebra | AC9M4N02 | Number and place value |
| Week 29 | 108 | 3:28 | The calendar | Measurement | AC9M4M03 | Measuring time |
| Week 29 | 109 | 3:29 | The calendar | Measurement | AC9M4M03 | Measuring time |
| Week 29 | 110 | 3:30 | The passage of time | Measurement | AC9M4M01 AC9M4M03 | Measuring time |
| Week 30 | 66 | 2:45 | Division using grid | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 30 | 67 | 2:46 | \times and \div (by 2, 4, 8) | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |

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Term 4

| Week - Program | Page | Unit | Title | Strand | Curriculum Code/s | Curriculum sub-elements |
|----------------|------|------|--|------------------------|----------------------|---|
| Week 31 | 68 | 2:47 | Mental strategies, \times and \div | Operations and algebra | AC9M4N05 AC9M4N06 | Multiplicative strategies, Number patterns and algebraic thinking |
| Week 31 | 69 | 2:48 | Working with numbers | Operations and algebra | AC9M4N06 AC9M4N08 | Number patterns and algebraic thinking |
| Week 31 | 111 | 3:31 | Measuring mass | Measurement | AC9M4M01 | Understanding units of measurement (Mass) |
| Week 31 | 112 | 3:32 | Personal benchmarks | Measurement | AC9M4M01 | Understanding units of measurement |
| Week 31 | 113 | 3:33 | Finding area | Measurement | AC9M4M02 | Understanding units of measurement (Area) |
| Week 32 | 70 | 2:49 | \times and \div (by 3, 6, 9) | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 32 | 71 | 2:50 | Division facts | Operations and algebra | AC9M4A02 | Number patterns and algebraic thinking |
| Week 32 | 137 | 4:20 | Visualising shapes | Space | AC9M4SP03 | Understanding geometric properties (2D space) |
| Week 32 | 138 | 4:21 | Acute and obtuse angles | Space | AC9M4M04 | Understanding geometric properties (Angles) |
| Week 32 | 139 | 4:22 | Angles of any size | Space | AC9M4M04 | Understanding geometric properties (Angles) |
| Week 33 | 72 | 2:51 | Money | Operations and algebra | AC9M4N01 AC9M4N06 | Understanding money |
| Week 33 | 73 | 2:52 | Rounding off money | Operations and algebra | AC9M4N01 AC9M4N06 | Number and place value, Understanding money |
| Week 33 | 74 | 2:53 | Counting change | Operations and algebra | AC9M4N01 AC9M4N06 | Additive strategies, Understanding money |
| Week 33 | 153 | 5:10 | Constructing spinners | Statistics | AC9M4P01 AC9M4P02 | Interpreting and representing data |
| Week 33 | 154 | 5:11 | Unequal outcomes | Probability | AC9M4P01 AC9M4P02 | Understanding chance |
| Week 34 | 75 | 2:54 | Multiplying by 10, 100, 1000 | Operations and algebra | AC9M4N05 | Multiplicative strategies |
| Week 34 | 76 | 2:55 | Dividing by 10, 100, 1000 | Operations and algebra | AC9M4N05 | Multiplicative strategies |
| Week 34 | 140 | 4:23 | Horizontal and vertical | Space | AC9M4SP01 | Understanding geometric properties |
| Week 34 | 141 | 4:24 | Tessellations | Space | AC9M4SP03 | Understanding geometric properties (2D space) |
| Week 34 | 142 | 4:25 | Rotational symmetry | Space | AC9M4SP03 | Understanding geometric properties (2D space) |
| Week 35 | 77 | 2:56 | Linking \div and \times | Operations and algebra | AC9M4A01 | Number patterns and algebraic thinking |
| Week 35 | 78 | 2:57 | Missing number strategies | Operations and algebra | AC9M4A01 | Number patterns and algebraic thinking |

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Term 4 cont.

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|---------|-----|------|----------------------------|------------------------|------------------------|--|
| Week 35 | 114 | 3:34 | Using mm when building | Measurement | AC9M4M01 | Understanding units of measurement (Length) |
| Week 35 | 115 | 3:35 | Length on a map | Measurement | AC9M4M01 | Understanding units of measurement (Length) |
| Week 35 | 155 | 5:12 | Surveys | Statistics | AC9M4ST03 | Interpreting and representing data |
| Week 36 | 79 | 2:58 | Partitioning, + and – | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 36 | 80 | 2:59 | Mental strategies, + and – | Operations and algebra | AC9M4N06 | Additive strategies |
| Week 36 | 116 | 3:36 | Problem solving | Measurement | AC9M4M01 AC9M4N08 | Understanding units of measurement, Additive relations, Multiplicative relations |
| Week 36 | 143 | 4:26 | Spreadsheets | Space | AC9M4SP02 | Positioning and locating |
| Week 36 | 156 | 5:13 | Graphing data | Statistics | AC9M4ST01 AC9M4ST02 | Interpreting and representing data |
| Week 37 | 117 | 3:37 | Problem solving | Measurement | AC9M4M01 AC9M4N08 | Understanding units of measurement, Additive relations, Multiplicative relations |
| Week 37 | 157 | 5:14 | Chance experiments | Probability | AC9M4P01 AC9M4P02 | Understanding chance, Interpreting and representing data |
| Week 37 | 158 | 5:15 | Carry out your own survey | Statistics | AC9M4ST03 | Interpreting and representing data |
| Week 37 | 159 | 5:16 | Chance experiments | Probability | AC9M4P01 AC9M4P02 | Understanding chance |

Australian Signpost Maths Year 4 (AC V9.0) Curriculum Map

| Strand | Code | Descriptor | Australian Signpost Maths 4 Lessons |
|--------|----------|--|--|
| Number | AC9M4N01 | recognise and extend the application of place value to tenths and hundredths and use the conventions of decimal notation to name and represent decimals | 1:01-2 Numbers to 10 000 1:03 Rounding off 1:08 Large numbers 1:09 Hundreds of thousands 1:13 Numbers using millions 1:14 Rounding off 1:15 Hundredths 1:16 Decimals 1:17 Tenths 1:18 Comparing decimals 1:19 Place value in decimals 1:20 Place value to hundredths 1:21 Reading and writing decimals 2:51 Money 2:52 Rounding off money 2:53 Counting change |
| Number | AC9M4N02 | explain and use the properties of odd and even numbers | 2:43 Odd and even numbers 2:44 Odd and even |
| Number | AC9M4N03 | find equivalent representations of fractions using related denominators and make connections between fractions and decimal notation | 1:11-12 Equivalent fractions 1:16 Decimals 1:17 Tenths |
| Number | AC9M4N04 | count by fractions including mixed numerals; locate and represent these fractions as numbers on number lines | 1:04 Fractions 1:05 Comparing fractions 1:06 Improper fractions 1:07 Mixed numbers 1:10 Fraction patterns |
| Number | AC9M4N05 | solve problems involving multiplying or dividing natural numbers by multiples and powers of 10 without a calculator, using the multiplicative relationship between the place value of digits | 2:47 Mental strategies, \times and \div 2:54 Multiplying by 10, 100, 1000 2:55 Dividing by 10, 100, 1000 |
| Number | AC9M4N06 | develop efficient strategies and use appropriate digital tools for solving problems involving addition and subtraction, and multiplication and division where there is no remainder | 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, - 2:11 \times 8 tables 2:13 Addition, trading 2 tens 2:14 Addition involving hundreds 2:16 \times 3, \times 6 tables 2:18 Subtraction with trading 2:19 Subtracting from tens 2:20 Subtracting with trading 2:23-24 Addition to 999 2:25 Writing algorithms 2:31-32 Subtraction without trading to 999 2:33 Subtraction with trading to 999 2:34 Subtraction with 2 trades to 99 2:35-36 Mental strategies, + and - 2:37 Subtracting from hundreds 2:38 Subtracting from hundreds strategy |

Australian Signpost Maths Year 4 (AC V9.0) Curriculum Map

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| | | | <p>2:39 Division as repeated subtraction 2:40 Understanding division 2:47 Mental strategies, \times and \div 2:48 Working with numbers 2:51 Money 2:52 Rounding off money 2:53 Counting change 2:58 Partitioning, $+$ and $-$ 2:59 Mental strategies, $+$ and $-$</p> |
| Number | AC9M4N07 | choose and use estimation and rounding to check and explain the reasonableness of calculations including the results of financial transactions | <p>2:14 Addition involving hundreds 2:23 Addition to 999 2:31-32 Subtraction without trading to 999 2:37 Subtracting from hundreds</p> |
| Number | AC9M4N08 | use mathematical modelling to solve practical problems involving additive and multiplicative situations including financial contexts; formulate the problems using number sentences and choose efficient calculation strategies, using digital tools where appropriate; interpret and communicate solutions in terms of the situation | <p>2:06 Addition and subtraction, no trading 2:08 Addition to 99 with trading 2:15 Addition problems to 99 2:25 Writing algorithms 2:37 Subtracting from hundreds 2:41 Division facts 2:48 Working with numbers 3:36-37 Problem solving</p> |
| Number | AC9M4N09 | follow and create algorithms involving a sequence of steps and decisions that use addition or multiplication to generate sets of numbers; identify and describe any emerging patterns | <p>2:01 Number patterns 2:26 What's the rule? 2:27 Number patterns</p> |
| Algebra | AC9M4A01 | find unknown values in numerical equations involving addition and subtraction, using the properties of numbers and operations | <p>2:56 Linking \div and \times 2:57 Missing number strategies</p> |
| Algebra | AC9M4A02 | recall and demonstrate proficiency with multiplication facts up to 10×10 and related division facts; extend and apply facts to develop efficient mental strategies for computation with larger numbers without a calculator | <p>2:02 Multiplication tables revision 2:03 $\times 4$ tables 2:04 Times tables review 2:12 $\times 8$ tables 2:17 $\times 3$ and $\times 6$ tables 2:21-22 $\times 9$ tables 2:28-29 $\times 7$ tables 2:30 Multiplication tables review 2:41-42 Division facts 2:45 Division using grids 2:46 \times and \div tables (by 2, 4, 8) 2:49 \times and \div tables (by 3, 6, 9) 2:50 Division facts</p> |
| Measurement | AC9M4M01 | interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units | <p>3:01 Analog time 3:02-3 Analog and digital time 3:04 Using a ruler 3:05 Centimetres and millimetres 3:06 Using millimetres 3:10 Temperature 3:11 Recording temperature 3:12-13 Using millilitres 3:14 Using L and mL 3:15 Measuring mass 3:16 Using grams</p> |

Australian Signpost Maths Year 4 (AC V9.0) Curriculum Map

| | | | |
|-------------|----------------|--|---|
| Measurement | AC9M4M01 cont. | interpret unmarked and partial units when measuring and comparing attributes of length, mass, capacity, duration and temperature, using scaled and digital instruments and appropriate units | 3:17 Telling time 3:18 Time 3:19 am and pm time 3:20 Recording length 3:21 Comparing measurements 3:22 Using measurement scales 3:23 Recording length 3:30 The passage of time 3:32 Personal benchmarks 3:34 Using mm when building 3:35 Length on a map 3:36-37 Problem solving |
| Measurement | AC9M4M02 | recognise ways of measuring and approximating the perimeter and area of shapes and enclosed spaces, using appropriate formal and informal units | 3:07 Square centimetres 3:08-9 The square centimetre 3:24-25 The square metre 3:33 Finding area |
| Measurement | AC9M4M03 | solve problems involving the duration of time including situations involving “am” and “pm” and conversions between units of time | 3:01 Analog time 3:02-3 Analog and digital time 3:18 Time 3:19 am and pm time 3:26 Timelines 3:27 Timetables 3:28-29 The calendar 3:30 The passage of time |
| Measurement | AC9M4M04 | estimate and compare angles using angle names including acute, obtuse, straight angle, reflex and revolution, and recognise their relationship 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 |
| Space | AC9M4SP01 | represent and approximate composite shapes and objects in the environment, using combinations of familiar shapes and objects | 4:04 3D objects 4:05 Prisms and pyramids 4:06 Faces of prisms and pyramids 4:07 Prisms and pyramids 4:14 Cones, cylinders and spheres 4:23 Horizontal and vertical 4:24 Tessellations |
| Space | AC9M4SP02 | create and interpret grid reference systems using grid references and directions to locate and describe positions and pathways | 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 |
| Space | AC9M4SP03 | recognise line and rotational symmetry of shapes and create symmetrical patterns and pictures, using dynamic geometric software where appropriate | 4:01 Flip, slide and turn 4:10 Investigating polygons 4:11 Visualising shapes 4:15 Views of 3D objects 4:20 Visualising shapes 4:24 Tessellations 4:25 Rotational symmetry |

Australian Signpost Maths Year 4 (AC V9.0) Curriculum Map

| | | | |
|--------------------|-----------|--|---|
| Statistics | AC9M4ST01 | acquire data for categorical and discrete numerical variables to address a question of interest or purpose, using digital tools; represent data using many-to-one pictographs, column graphs and other displays or visualisations; interpret and discuss the information that has been created | 5:01 Drawing tables 5:08 Tally marks 5:13 Graphing data |
| Statistics | AC9M4ST02 | analyse the effectiveness of different displays or visualisations in illustrating and comparing data distributions, then discuss the shape of distributions and the variation in the data | 5:04 Using graphs 5:05 Reading graphs 5:08 Tally marks 5:13 Graphing data |
| Statistics | AC9M4ST03 | conduct statistical investigations, collecting data through survey responses and other methods; record and display data using digital tools; interpret the data and communicate the results | 5:09 Collecting information 5:12 Surveys 5:15 Carry out your own survey |
| Probability | AC9M4P01 | describe possible everyday events and the possible outcomes of chance experiments and order outcomes or events based on their likelihood of occurring; identify independent or dependent events | 5:02-3 Chance 5:06 Ordering events 5:07 Chance used in games 5:10 Constructing spinners 5:11 Unequal outcomes 5:14 Chance experiments 5:16 Chance experiments |
| Probability | AC9M4P02 | conduct repeated chance experiments to observe relationships between outcomes; identify and describe the variation in results | 5:02 Chance 5:10 Constructing spinners 5:11 Unequal outcomes 5:14 Chance experiments 5:16 Chance experiments |

What is Australian Signpost Maths?

Australian Signpost Maths is a mathematics program providing direction and support for teaching and learning. The series covers the content and skills presented in the Australian Curriculum (v9) Mathematics F–6.

A Student Book and an online Teacher Resource are provided for Foundation.

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 F–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



Structure of Australian Signpost Maths

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. 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.

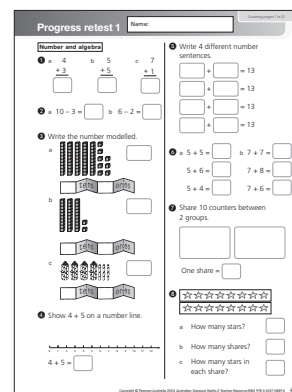
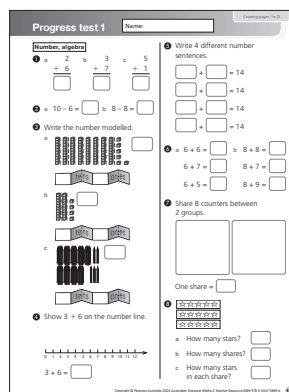
Identification and addressing areas of need

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.

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

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



Special features of Australian Signpost Maths

- **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–xxii 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 any follow up and parallel tests are provided for retesting. These tests are in the online Teacher Resource.

- **Year 4 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 the online Teacher Resource.

- **Blackline masters (BLM)**

References are made to the blackline masters in the online teacher notes provided for each Student Book work page. The BLMs are also accessed online.

- **Differentiation**

Each Student Book 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.

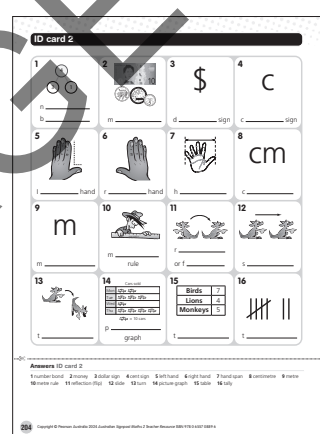
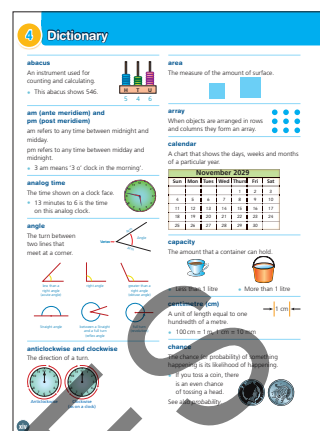
The online Teacher Resource support pages provide additional learning activities for students who need remediation or extension activities. The Blackline Masters provide activities to support students of various learning abilities.

- **Cartoons**

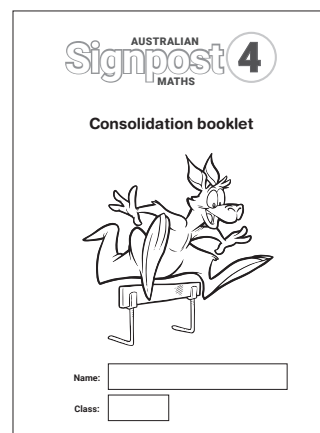
Cartoons are used to motivate and instruct.

- **Extra support pages**

Addition and subtraction facts are reinforced in Extra support 1. In Years 3 and 4, the algorithm strategy pages extend the fast workers. In Years 5 and 6 there is support for decimals, fractions, multiplication and problem solving.



| Remediation records: Progress tests | |
|-------------------------------------|--|
| Question | Page |
| Progress test 1 | |
| Question | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 |
| Student book page | 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 |
| Extra practice | 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 |
| Progress test 2 | |
| Question | 1 2 3 4 5 6 7 8 9 10 11 12 13 |
| Student book page | 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 |
| Extra practice | 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 |
| Progress test 3 | |
| Question | 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 |
| Student book page | 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 |
| Extra practice | 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 |



Australian Signpost Maths 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 activities involve the use of computers or other **information and communications** technology.



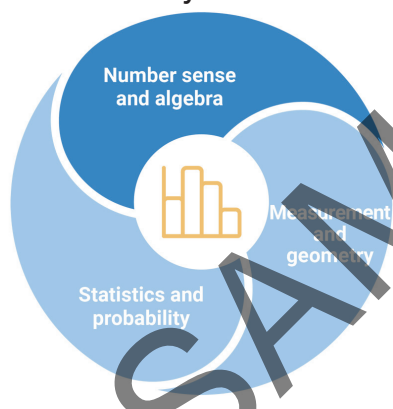
These enjoyable activities are used to **motivate and involve** students in mathematical pursuits. They usually involve games and puzzles.

I'm on the top of each page.



Structure of the Australian Curriculum, F–6 (v9)

Numeracy elements



Curriculum content is organised under 6 interrelated strands: Number, Algebra, Measurement, Space, Statistics and Probability.

Sub-elements for Number sense and algebra

| | | |
|--|------------------------|---------------------|
| Number and place value | Counting processes | Additive strategies |
| Multiplicative strategies | Interpreting fractions | |
| Number patterns and algebraic thinking | Understanding money | |

Sub-elements for Measurement and geometry

| | |
|------------------------------------|------------------------------------|
| Understanding units of measurement | Understanding geometric properties |
| Positioning and locating | Measuring time |

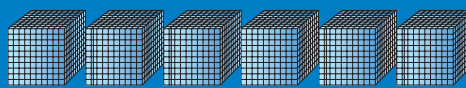
Sub-elements for Statistics and probability

| | |
|----------------------|------------------------------------|
| Understanding chance | Interpreting and representing data |
|----------------------|------------------------------------|

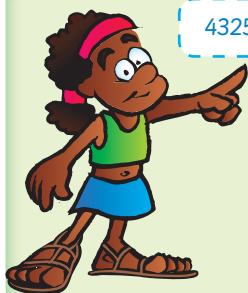
The Curriculum strives to develop in students proficiency in Mathematics, highlighting Understanding, Fluency, Reasoning and Problem solving.

Mathematics content of the Australian Curriculum

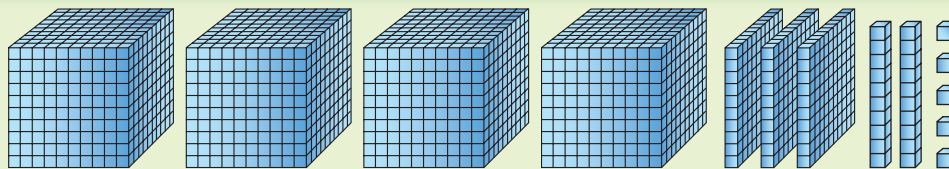
- It is important that you download the **GENERAL CAPABILITIES** document from 'Downloads' in the top navigation bar of the website homepage. It contains the tables that list the progression level expectations for each Year, F to 10. It also provides the content of all progression levels.
- The **LEARNING AREAS** download gives a summary of Content descriptions and Elaborations. **CROSS-CURRICULUM PRIORITIES** can also be found there.



CONCEPT



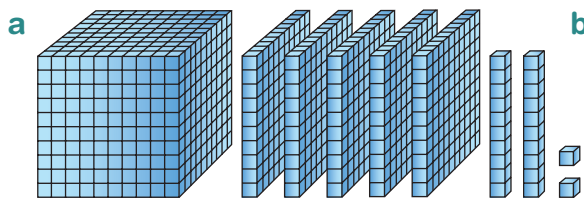
4325



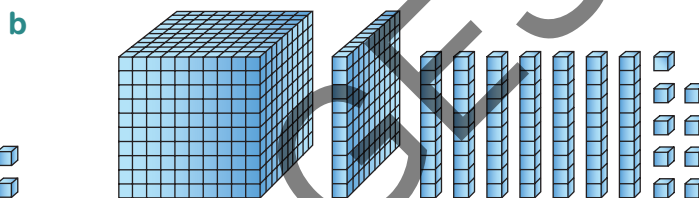
4 thousands 3 hundreds 2 tens 5 ones

four thousand, three hundred and twenty-five

1 Fill out the numeral expander and write the numeral.

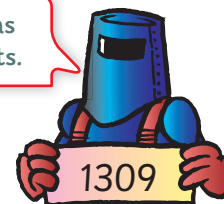


thousands hundreds tens ones



thousands hundreds tens ones

1309 has four digits.



2 How many digits are there in each numeral?

- a 639 b 1256 c 3970 d 567
 e 4982 f 135 g 76 h 5200

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
 e two thousand, six hundred and thirty-four f two thousand, six hundred
 g eight thousand, five hundred and sixty-eight h four thousand and thirty

4 Write in words:

- a 4023
 b 9030
 c 7500
 d 2901

Ten thousand = 10 000 = 10 × 1000 = 100 × 100 = 1000 × 10. There are 4 zeros in each.

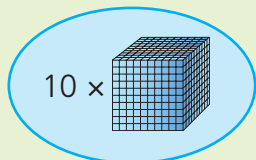


We leave a space after the 1000s column except when there are only four digits.

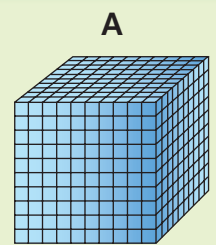
67 208
14 000
8172



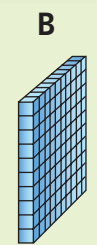
Each column has ten times the value of the one on its right.



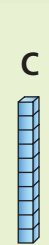
10 ×
1 ten-thousand
10 × 1000



A
1 thousand
10 × 100



B
1 hundred
10 × 10



C
1 ten
10



D
1 one
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 |

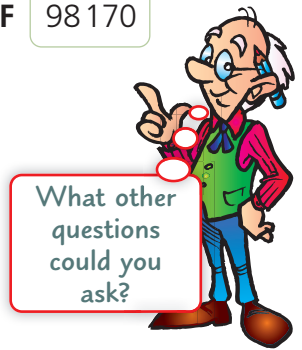
When we multiply by 10 we add a zero.

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.



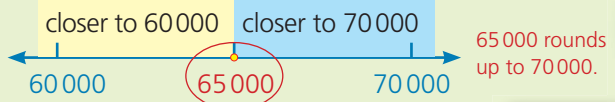
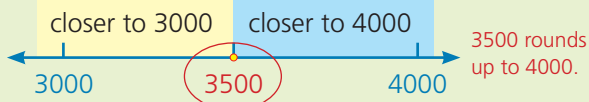


CONCEPT



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

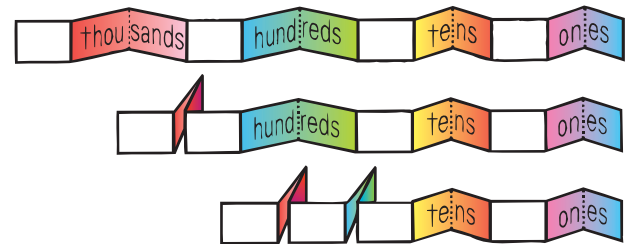
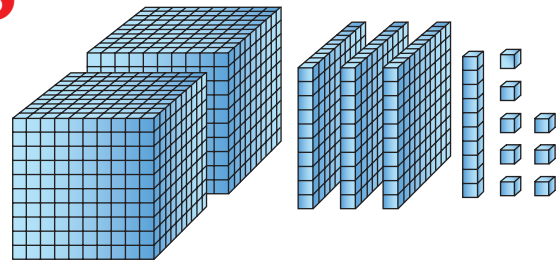
b Circle numbers that round off to 80 000.

- 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

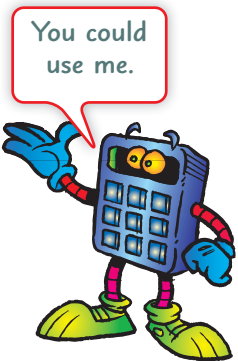




Use skip counting to continue the patterns on this page. Add on the same number each time.

- 1
- a 1, 2, 3, 4, , , , , ,
 - b 2, 4, 6, 8, , , , , ,
 - c 3, 6, 9, 12, , , , , ,
 - d 4, 8, 12, 16, , , , , ,
 - e 5, 10, 15, 20, , , , , ,
 - f 6, 12, 18, 24, , , , , ,
 - g 7, 14, 21, 28, , , , , ,
 - h 8, 16, 24, 32, , , , , ,
 - i 9, 18, 27, 36, , , , , ,
 - j 10, 20, 30, 40, , , , , ,

- 2
- a 9, 10, 11, ,
 - b 18, 20, 22, ,
 - c 27, 30, 33, ,
 - d 36, 40, 44, ,
 - e 45, 50, 55, ,
 - f 54, 60, 66, ,
 - g 63, 70, 77, ,
 - h 72, 80, 88, ,
 - i 81, 90, 99, ,
 - j 90, 100, 110, ,



- 3 Consider your answers to Question 1. Describe the pattern made by the last digits of each number in part:
- a b
 - b d
 - c e
 - d f
 - e h
 - f i
 - g j

- 4 Make two number patterns of your own.
- a , , ,
 - b , , ,

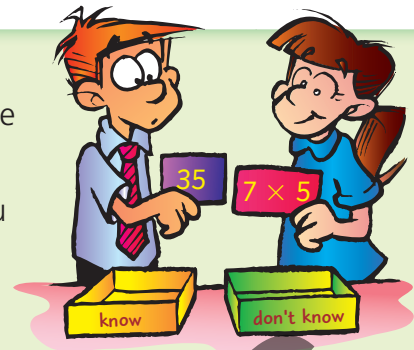


Step 1: Have someone test you.

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

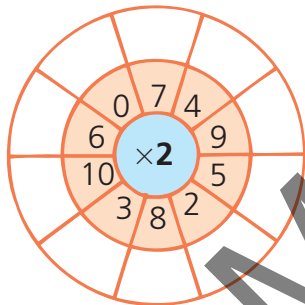


1 Use skip counting to complete.

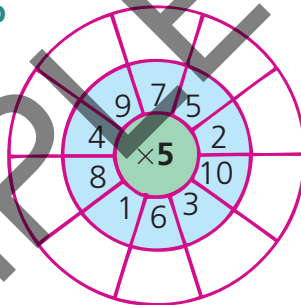
| × | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----|---|---|---|---|---|---|---|---|---|---|----|
| 1 | | | | | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 10 | | | | | | | | | | | |

2 Complete these number wheels.

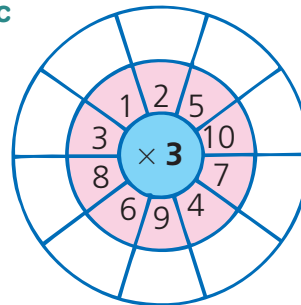
a



b



c

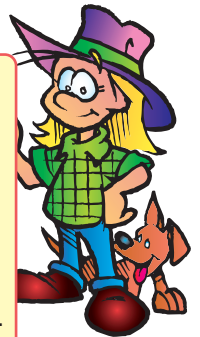


- 3
- | | | | |
|---|---|--|---|
| <p>a</p> $\begin{array}{r} 1 \\ \times 4 \\ \hline \end{array}$ | <p>b</p> $\begin{array}{r} 5 \\ \times 6 \\ \hline \end{array}$ | <p>c</p> $\begin{array}{r} 10 \\ \times 7 \\ \hline \end{array}$ | <p>d</p> $\begin{array}{r} 2 \\ \times 5 \\ \hline \end{array}$ |
|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

5
× 3
□

means

3 × 5 = □



Multiplication cards

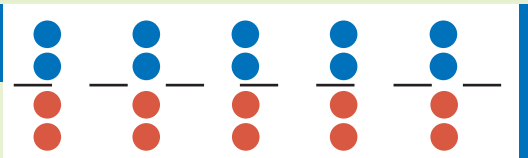
- Cards marked 1 to 10 are placed face down in a pile.
- One card is turned at a time. The first to correctly multiply the card by 5, keeps the card. The player with the most cards wins.

ACTIVITY





5×2



5×4

x 4 is easy when we double the x 2 tables.

$5 \times 2 = 10$

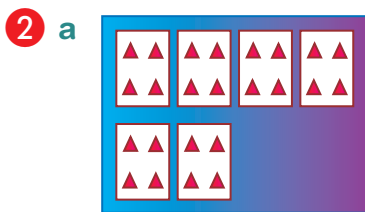
5×4 is double
 5×2 .

$5 \times 4 = 20$

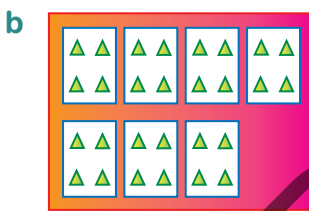
CONCEPT



- 1 a** $1 \times 2 =$ **b** $7 \times 2 =$ **c** $10 \times 2 =$ **d** $8 \times 2 =$
 $1 \times 4 =$ $7 \times 4 =$ $10 \times 4 =$ $8 \times 4 =$



6 groups of 4 =



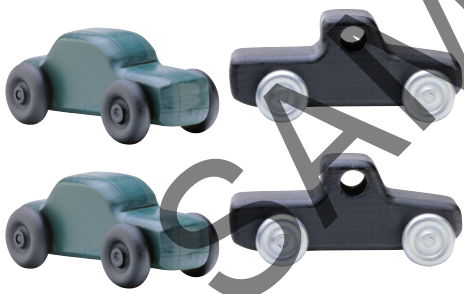
7 groups of 4 =

Use skip counting to complete.

- c** 4 groups of 4 =
d 9 groups of 4 =
e 8 groups of 4 =

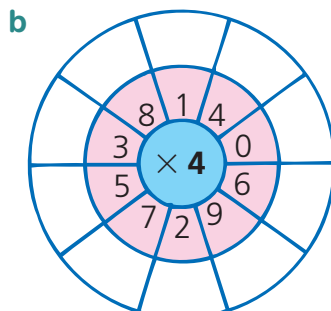
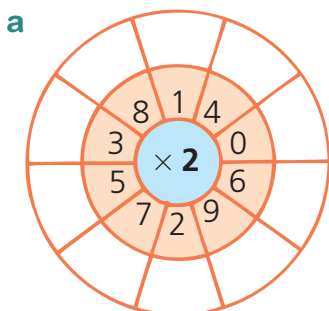
3 Complete the table.

| x | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|----|
| 2 | | | | | | | | | | | |
| 4 | | | | | | | | | | | |



- 4 a** 3 groups of 4 cars
 \times =
b 5 groups of 4 cars
 \times =
c 10 groups of 4 cars
 \times =
d 11 groups of 4 cars
 \times =

5 Complete these number wheels.



All answers to x 4 tables end in 2, 4, 6, 8 or 0.



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



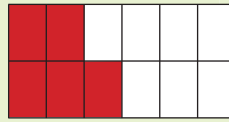
CONCEPT



Numerator \rightarrow 5
Denominator \rightarrow 12 is 5 of 12 equal parts.

5 parts have been coloured.

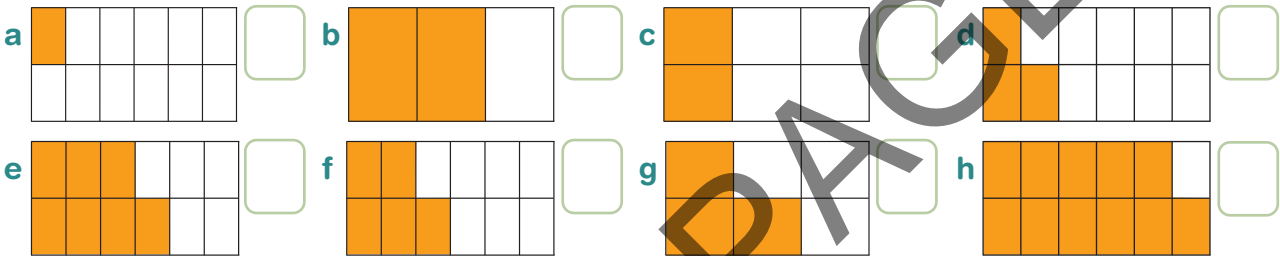
7 parts have not been coloured.



$\frac{5}{12}$



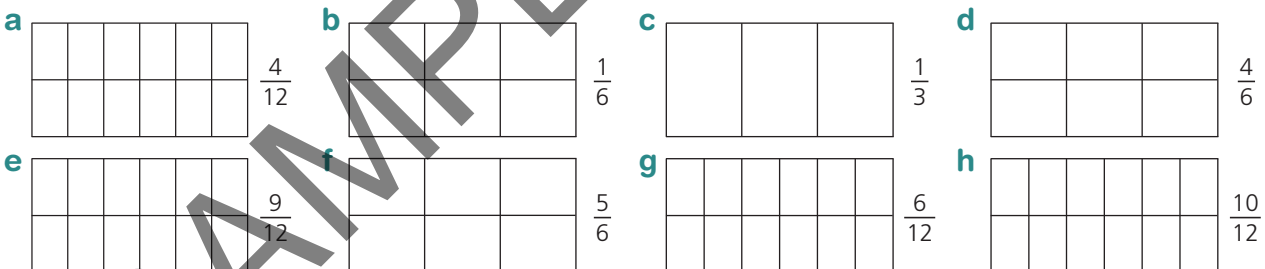
1 What part of each shape has been coloured?



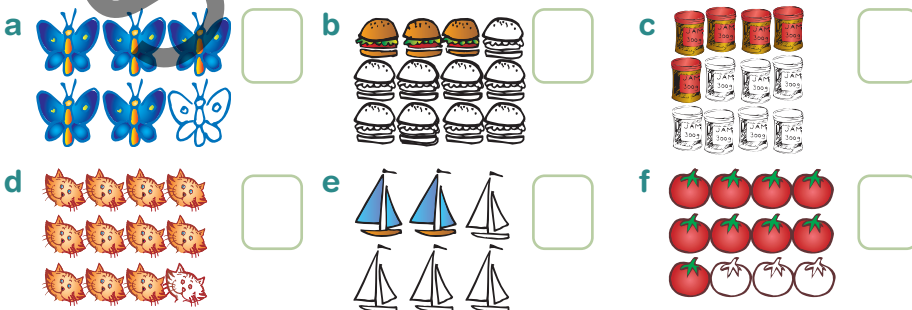
2 What part of each shape above has not been coloured?



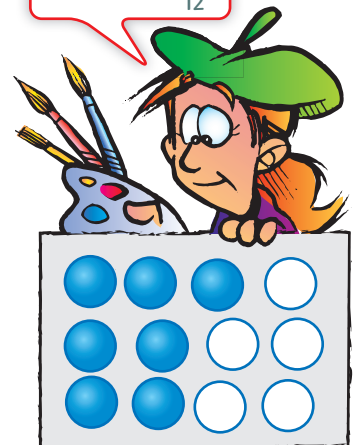
3 Colour part of each shape to match the given fraction.



4 What part of each group has been coloured?



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



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

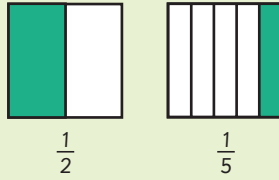




CONCEPT



This is cut into two equal parts.



$\frac{1}{2}$

$\frac{1}{5}$

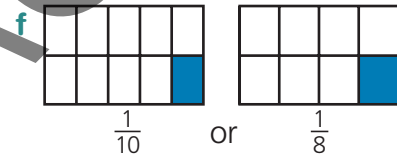
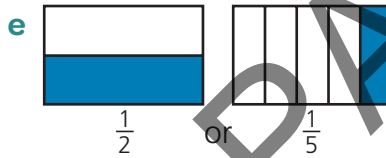
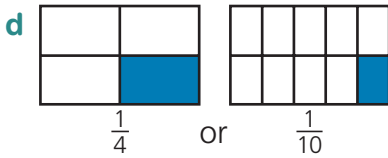
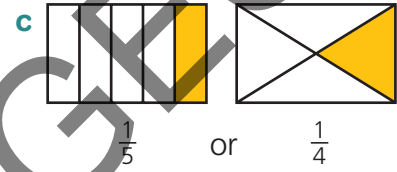
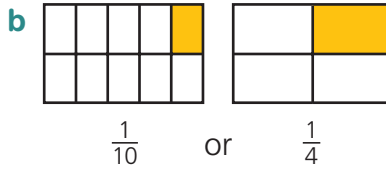
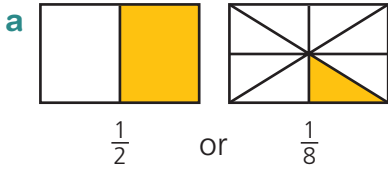
This is cut into five equal parts.



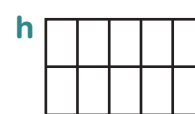
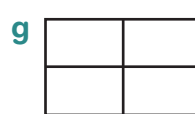
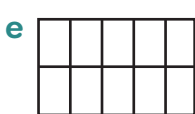
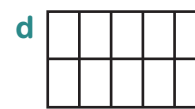
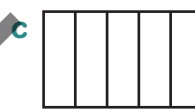
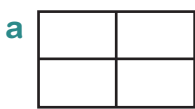
We need to have :
equal wholes
to compare
fraction parts.

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

1 Circle the larger fraction.



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



3 Write true or false for each statement.

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 $1 = \frac{5}{5}$

$\frac{2}{2}$, $\frac{5}{5}$ and $\frac{10}{10}$ are all 1.



4 Find the coloured fraction.



Fraction coloured =



Fraction coloured =



Fraction coloured =

Circle the larger fraction.

d $\frac{1}{10}$ or $\frac{1}{5}$

e $\frac{1}{2}$ or $\frac{1}{5}$

f $\frac{1}{2}$ or $\frac{3}{5}$

g $\frac{7}{10}$ or $\frac{1}{2}$

h $\frac{3}{10}$ or $\frac{1}{5}$

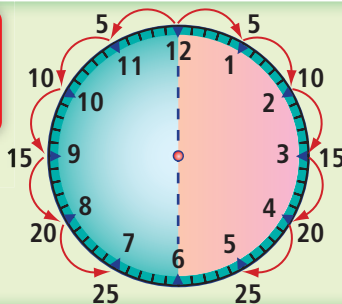
to the next hour.



CONCEPT



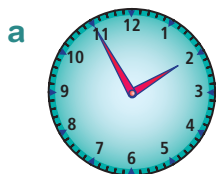
This side shows the number of minutes before the hour.



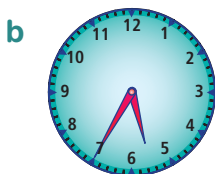
This side shows the number of minutes after the hour.



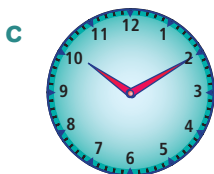
1 Complete the label for each time shown.



5 to 2



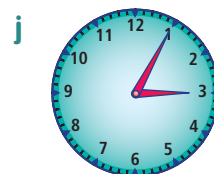
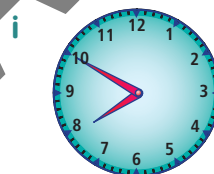
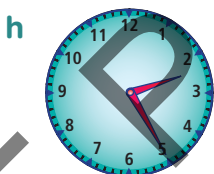
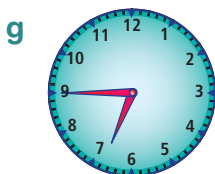
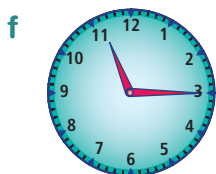
25 to 6



10 past 10



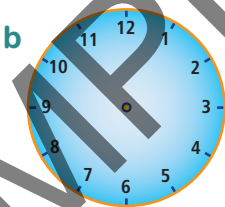
20 to 5



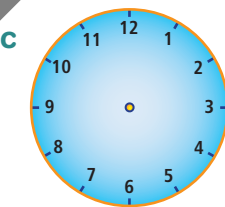
2 Complete the clocks to show the given times.



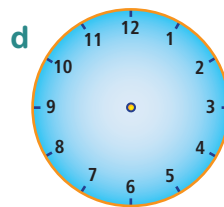
10 to 4



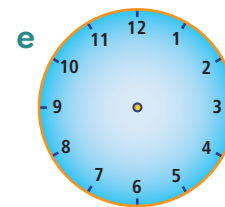
20 past 7



25 to 10



5 to 6



5 past 4

3 Write the time that is five minutes after:

a 5 past 8

b 10 past 7

c 10 to 12

d 15 past 6

e 20 to 8

f 15 to 3

g 20 past 3

h 25 to 3

i 5 to 9

4 Write the time that is five minutes before:

a 25 past 1

b 10 past 4

c 15 to 4

d 10 to 5

e 20 past 6

f 25 to 8

g 15 past 10

h 20 to 11

i 5 past 2





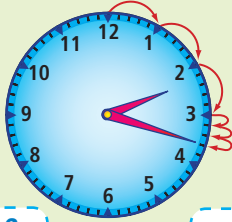
CONCEPT



Each little mark stands for one minute.



Analog time



18 past 2

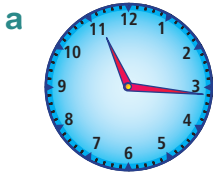
2:18

The hour hand has passed 2.

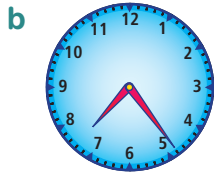
The minute hand has gone 5, 10, 15, 16, 17, 18 minutes from 12.

The time is 18 past 2 or 2:18.

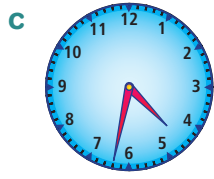
1 Complete the labels for each time shown.



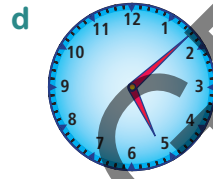
11 :
 past



7 :
 past



4 :
 to



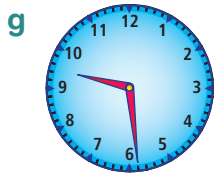
5 :
 past



3 :
 to



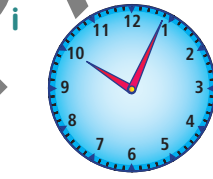
12 :
 to



9 :
 past



6 :
 to



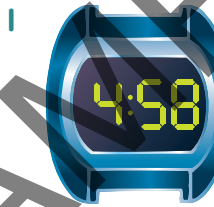
10 :
 past



8 :
 to



to



to



past



past



to

2 Write the time that is one minute after:

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 the time that is five minutes after:

a 4:13

b 9:41

c 7:32

d 10:54

e 8:16

f 5:58

Use this clock to help you.





If the hair cutting began at 17 past 5 and finished at 17 to 6, how long did it take?



CONCEPT



These are analog clocks.

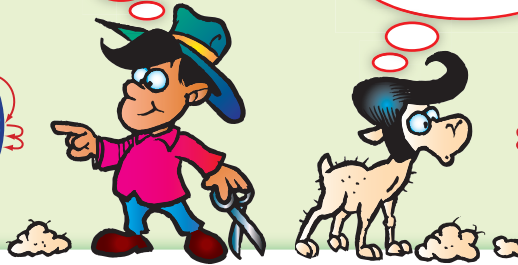
5, 10, 15, 16, 17 minutes.

5, 10, 15, 16, 17 minutes.

min is short for minutes.

17 past 5

5:17



17 to 6

5:43

1 Complete the label for each time shown.

a



past

b



to

c



past

d



past

e



to

2 Complete the label for each time shown.

a



past

b



past

c



past

d



past

e



past

3 The cross-country run began at 10:15. I finished at 10:58. How long did I take? min

Ron, who was also in the race, finished at 10:50. How long did he take? min

The winner of the race finished the run at 10:43. 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 did not reach school until 14 minutes later. When did he get there?

4 We left Griffith at 9:13 and arrived in Hillston at 11:30. How long did we take?

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

They left at 7:15. It took them 1 hour 23 minutes. When did they reach the river?

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



AUSTRALIAN
Signpost
MATHS

SAMPLE PAGES

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
- Column 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.



1:1

out of 17

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

- 11 $40\,000 + 2\,000 + 900 + 20 + 6$ _____
- 12 $\frac{1}{10}, \frac{2}{10}, \frac{3}{10}$, , , ,
- 13 Circle the largest number.
46716, 46293, 44912
- 14 If $36 + 7 = 43$, then $136 + 7 =$ _____
- 15 Colour the change I would get from 50 cents when I spend 35 cents.

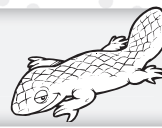


- 16 Which of the terms *impossible*, *unlikely*, *likely* or *certain* describes the chance of you finding \$20 tomorrow?
- 17 Match each fraction to a decimal.

| | | | |
|----------------|-----|-----------------|-----|
| $\frac{7}{10}$ | 0.9 | $1\frac{8}{10}$ | 1.6 |
| $\frac{4}{10}$ | 0.7 | $1\frac{6}{10}$ | 1.8 |
| $\frac{9}{10}$ | 0.4 | $1\frac{3}{10}$ | 1.3 |



1:2



out of 15

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

- 11 Write the decimal for 7 tenths. _____
- 12 Use the jump strategy to find:
 $36 + 29 =$ _____
←—————→
- 13 Use decimals to write zero point nine. _____

- 14 What date is the:
a second Saturday?

- b fourth Monday?

| 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 | | |

- 15 Write these numbers on the place-value chart.
a 846393 b 80475 c 87637

| | Thousands | Hundreds | Tens | Ones |
|---|-----------|----------|------|------|
| a | | | | |
| b | | | | |
| c | | | | |



→

→

→

* * * *

1:3

out of 8

1 Write the decimal for:

a $\frac{8}{10}$ _____ b $\frac{2}{10}$ _____ c $\frac{7}{10}$ _____

d $8\frac{6}{10}$ _____ e $3\frac{5}{10}$ _____

2 Colour 3 fifths of this shape.



3 The fraction for 5.8 is $5\frac{8}{10}$.

Write the fraction for:

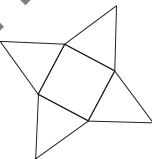
a 1.8 b 3.9 c 6.7

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 Is $8\frac{3}{5}$ equal to $8\frac{4}{10}$? _____

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

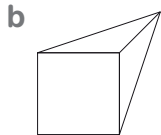
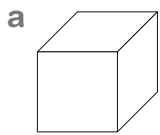
out of 18

2:2

out of 17

- 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.



- 12 Write these decimals as tenths.

a $0.3 = \frac{\square}{10}$

b $0.6 = \frac{\square}{10}$

c $0.9 = \frac{\square}{10}$

- 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 32 520 larger than 32 509? _____

- 16 $30000 + 2000 + 200 + 40 + 2$ _____

- 17 I walked along a 5 m balance beam 3 times. How far did I walk? _____

- 18 The number before 56 723 is _____.

- 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  a This time is _____ minutes past _____.

b It is also read as _____.



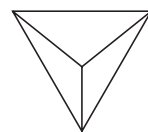
$2 : \square$

$7 : \square$

\square past 2

\square to 8

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

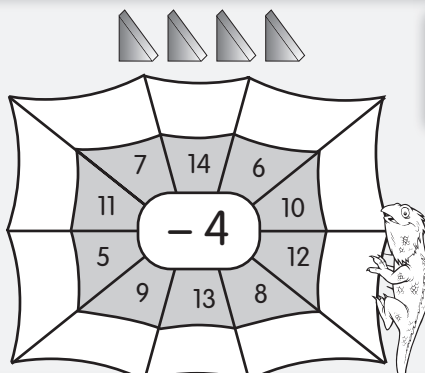
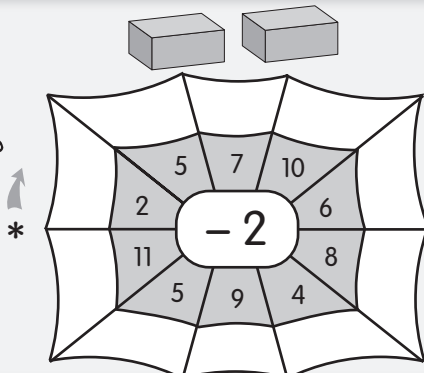


- 14 Is the height of your mother more than 2 metres? _____

- 15 8 days after Wednesday is _____.

- 16 The 9th month of the year is _____.

- 17 $13 + 17 + 12 + 8$ _____



even - even = _____

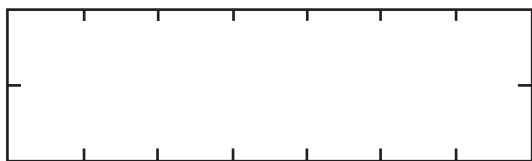
odd - even = _____



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 sixty-seven thousand, 4 hundred and seventeen. _____
- Describe this rectangle and write the area. _____



_____ rows of _____ Area = _____ cm²

- The analog time is _____ to _____.
 - The digital time. is _____ : _____.



- What is the time ten minutes after: a quarter to 4? _____
 - 3 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 is May 14 and my birthday is May 30. What day will my birthday be if it is Sunday today? _____



Challenge

Write questions that are equal to:

- | | | |
|-------------|------------|----------------|
| a $34 - 12$ | b $35 + 3$ | c 5×8 |
| = _____ | = _____ | = _____ |
| = _____ | = _____ | = _____ |
| = _____ | = _____ | = _____ |
| = _____ | = _____ | = _____ |



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