

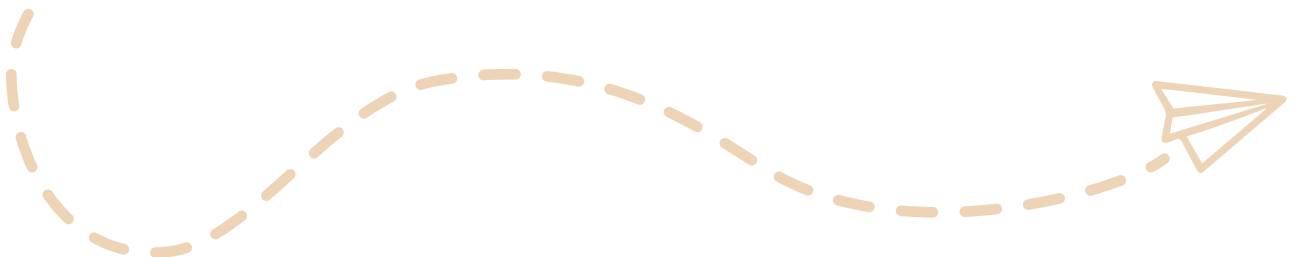


# Parent support materials

Introduction

English

Maths





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# Introduction

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Welcome to Year 4 of the **Parent support materials**.

These Parent support materials include resources and practical ideas for supporting your student's learning@home.

The relevant year level Parent support materials can be printed (recommended in colour) and referring to when completing learning@home **two-week units of work**.

It contains:

- English resources
- Maths resources
- Helpful information.

The **Parent support materials** provide additional activities that can be used with the two-week units of learning provided by the Queensland Department of Education on the [learning@home](#) website. These **Parent support materials** could also be used as a standalone resource.

# ENGLISH



## Introduction

Welcome to the English section of the **Parent support materials**.

## Reading introduction

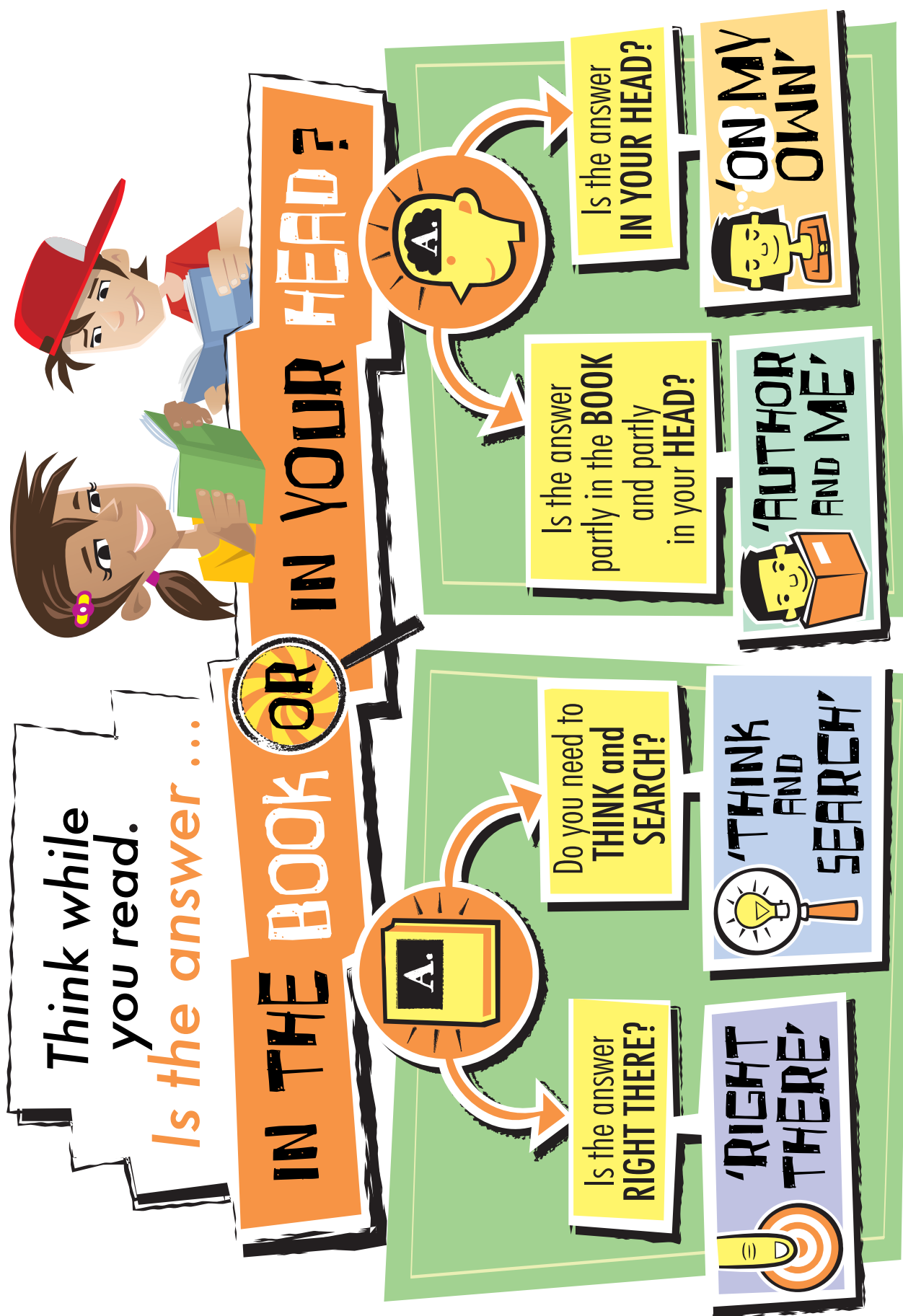
### Question–answer relationship (QAR)

The question–answer relationship (QAR) strategy assists in improving reading comprehension skills by showing students the relationship between questions about the text and the answers. If students can understand the type of question, they will know where they can find information to answer questions about a text.

The strategy outlines where information to answer questions about a text can be found — *In the book* or *In your head*.

*In the book* questions (*Right there* and *Think and search*) are those whose answers are found in the book. These are literal questions and answers.

*In your head* questions (*Author and me* and *On my own*) are those whose answers are developed from the reader's own ideas and experiences. They are not directly found in the book. These are inferential questions and answers.







# MATHS



## Introduction

Welcome to the Maths section of the **Parent support materials**.

## Maths box

You may like to build a **Maths box** (for example: a plastic storage container with a lid or a cupboard). Hands on materials can be helpful for supporting students' mathematical understandings.

## Suggested resources for your Maths box

Bathroom scales / kitchen scales

Boards/cutters/plastic knives

Calculators

Calendar samples

Chalk

Collection of materials (for example:  
blocks, counters, bundling sticks, pegs,  
paperclips, ice-cream sticks)

Collection of notes and coins (play money)

Coloured paper squares

Counters

Dice — 6-sided, 10-sided

Disposable plates / paper bags / streamers

Dominoes or domino cards

Linking cubes

Maps — variety of different local, national and  
international

Pipe-cleaners/straws

Materials for measuring:

- Length — ribbons, string, shoelaces, tape measures, rulers
- Area — square tiles, sticky notes, sponges
- Mass — playdough, marbles/beads, tennis balls, rice, washers, bolts, tins (assorted sizes — full and empty)
- Capacity/volume — assorted containers and lids, spoons, assorted cups and scoops, jugs, sand, measuring cylinders
- Time — stopwatch, clocks (analog and digital).

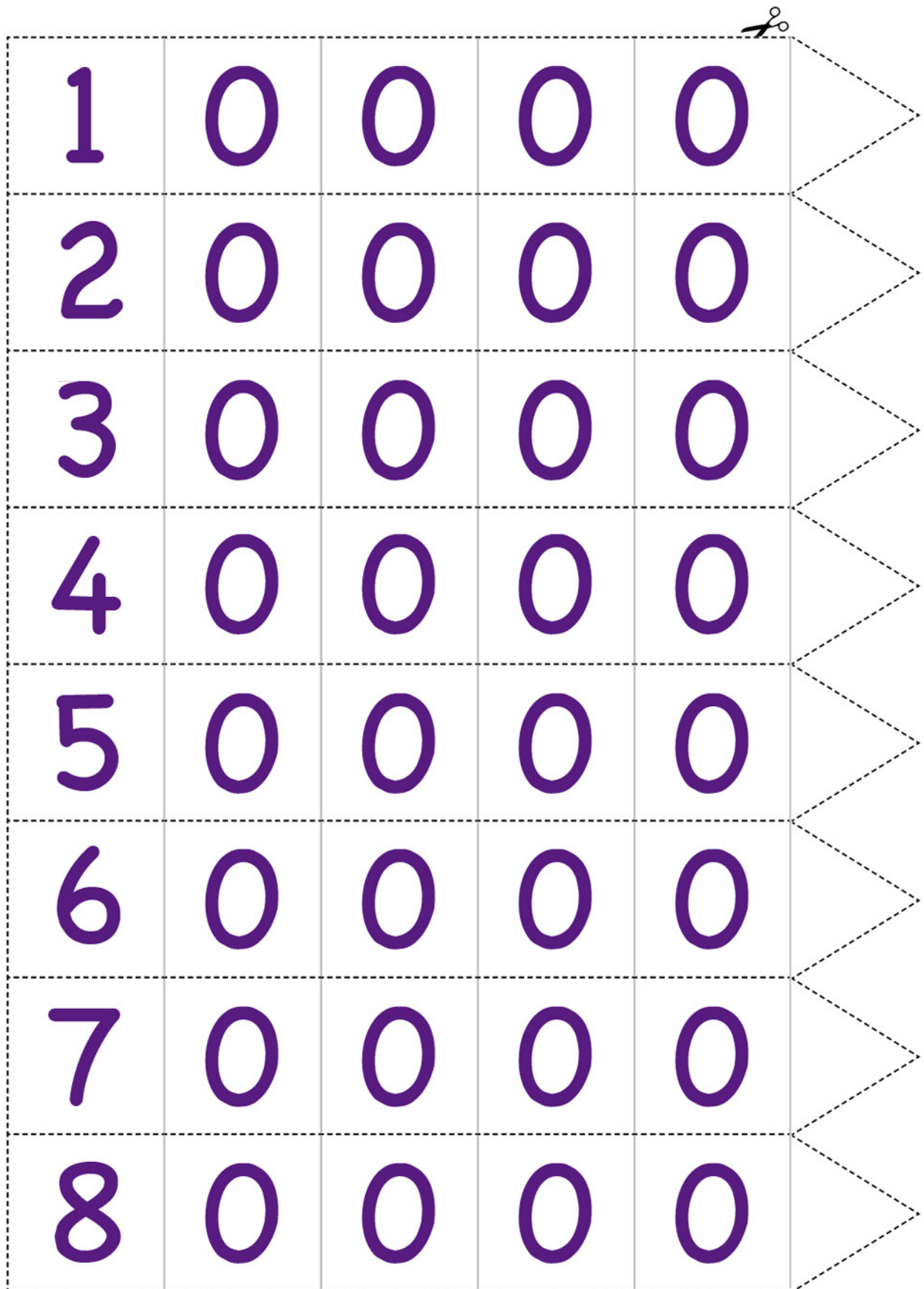
Sticky notes

Split pins

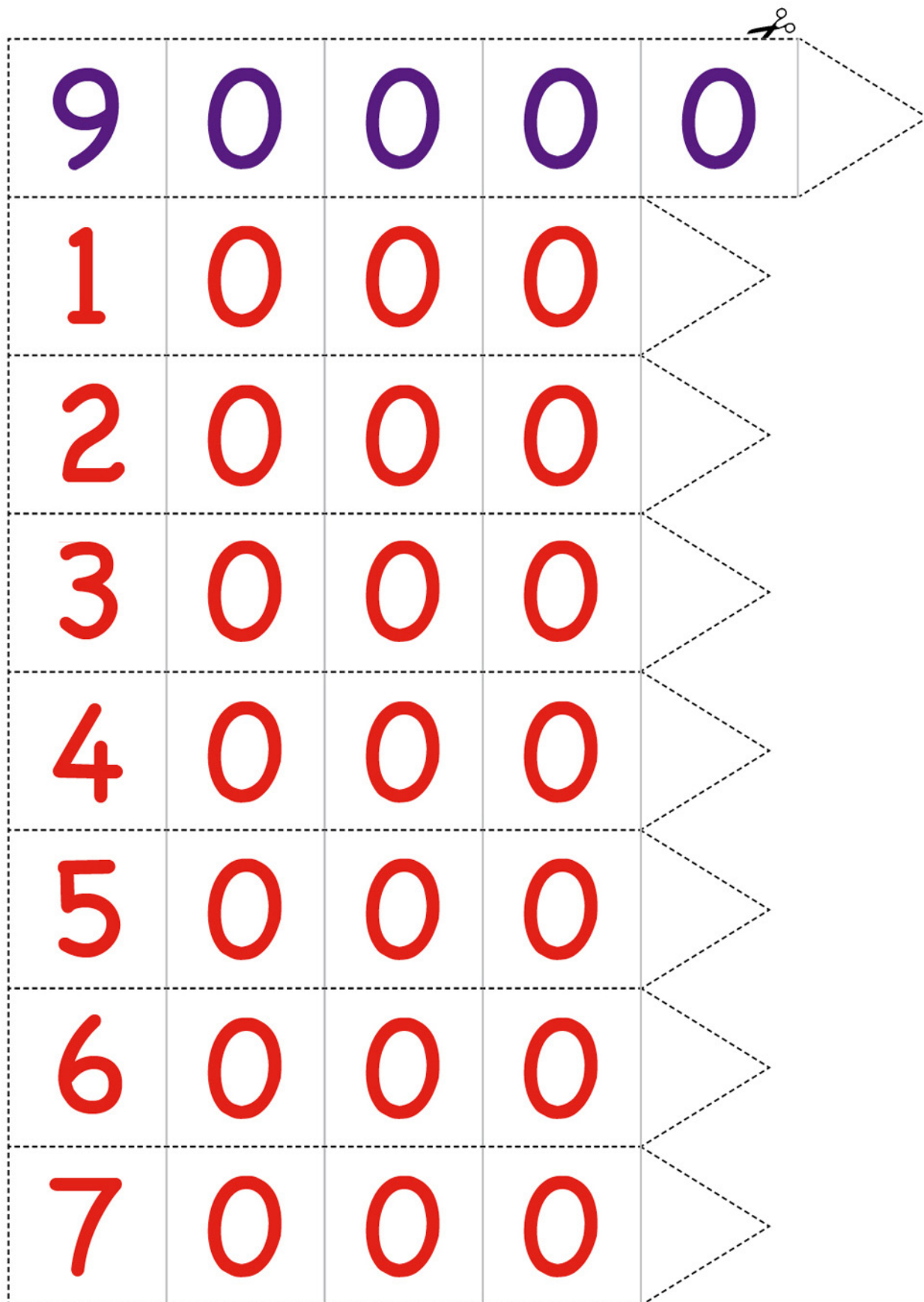
Thermometers



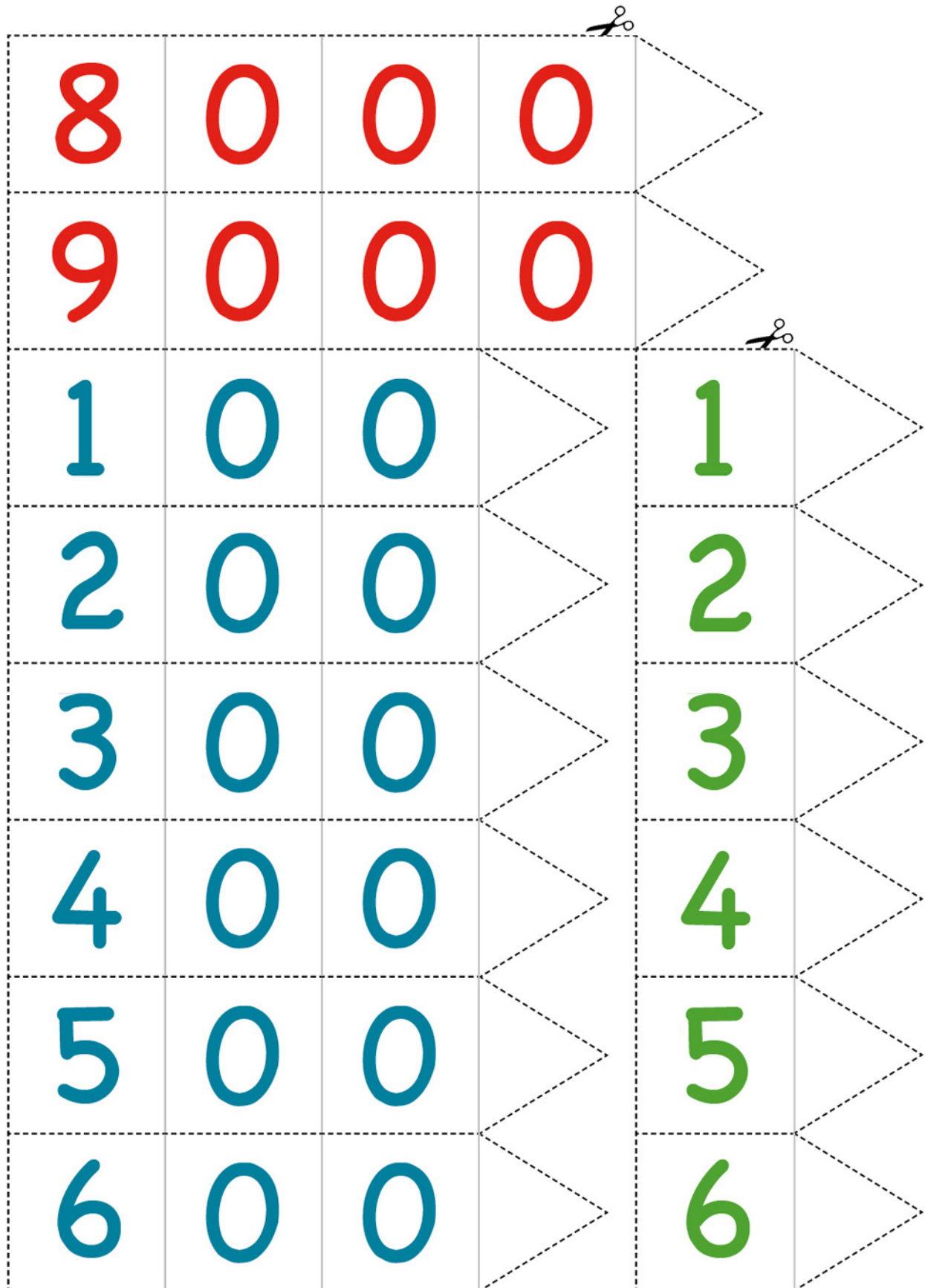
## Arrow cards





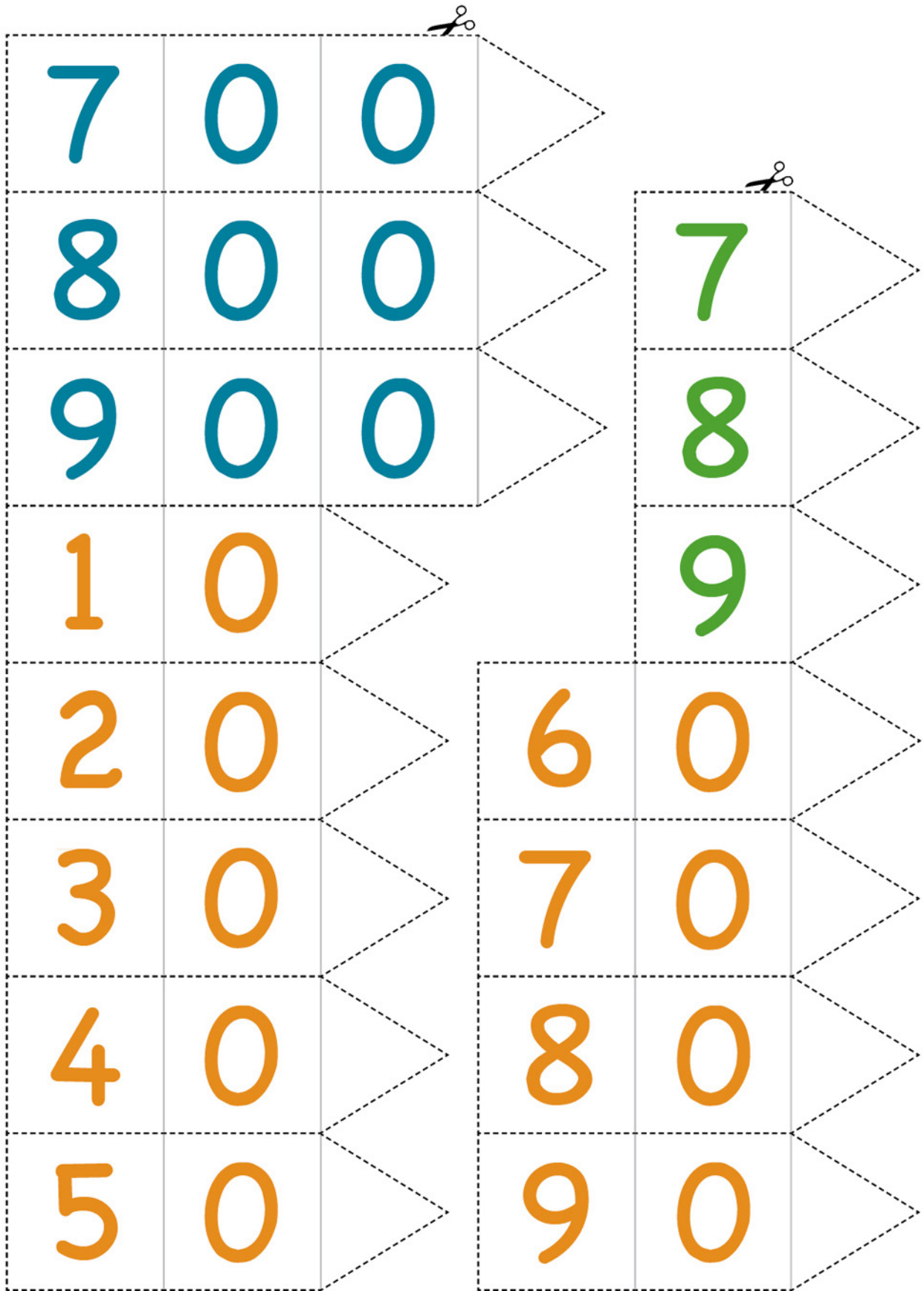














# Centimetre and metre strip

strip A	strip B	strip C	strip D	strip E
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 <i>cm</i>	20 21 22 23 24 25 26 27 28 29 <b>30</b> 31 32 33 34 35 36 37 38 39	40 41 42 43 44 45 46 47 48 49 <b>50</b> 51 52 53 54 55 56 57 58 59	60 61 62 63 64 65 66 67 68 69 <b>70</b> 71 72 73 74 75 76 77 78 79	80 81 82 83 84 85 86 87 88 89 <b>90</b> 91 92 93 94 95 96 97 98 99 <b>100</b> <i>1 metre</i>
	Glue to strip A	Glue to strip B	Glue to strip C	Glue to strip D

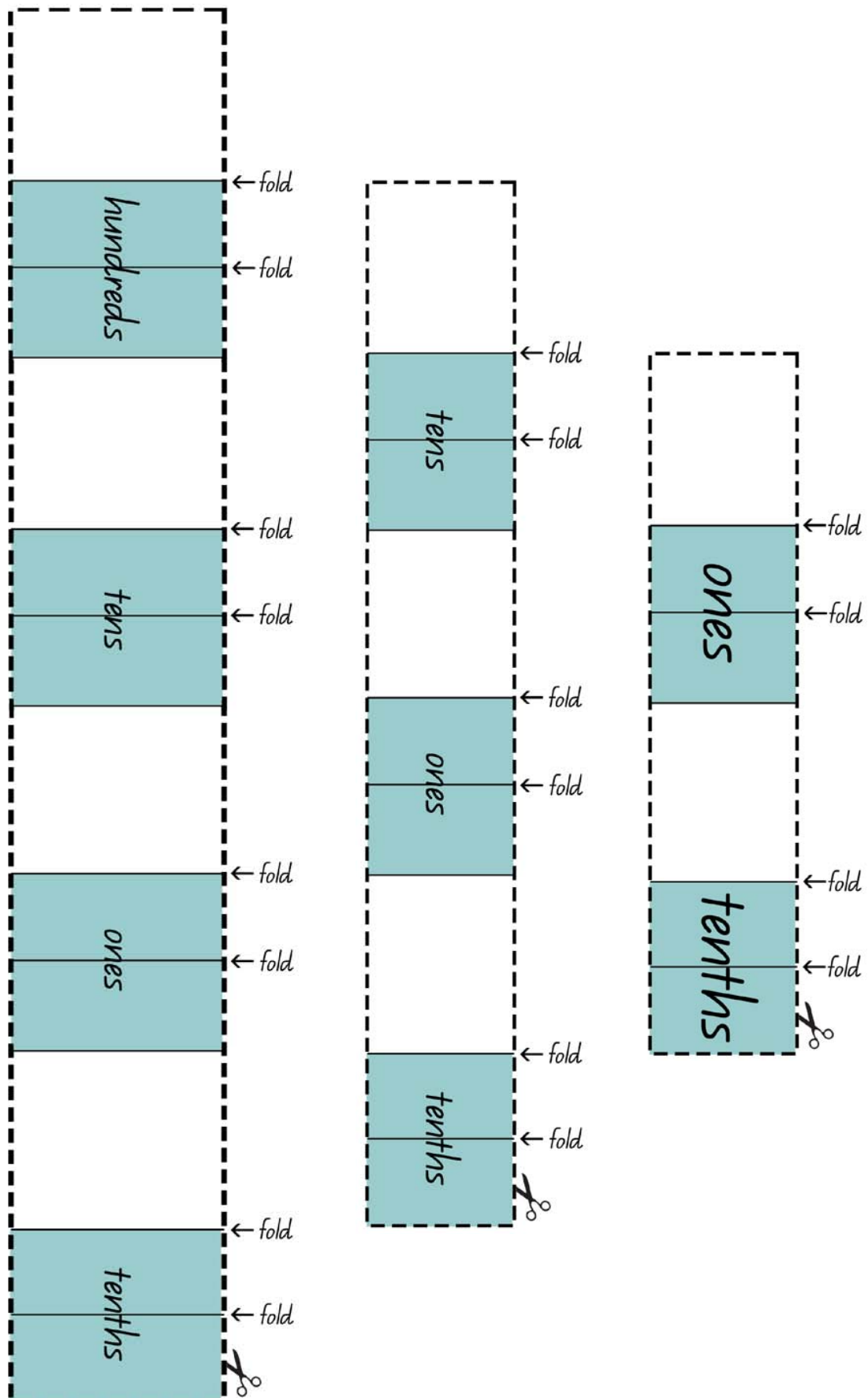


# Multiplication grid

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100



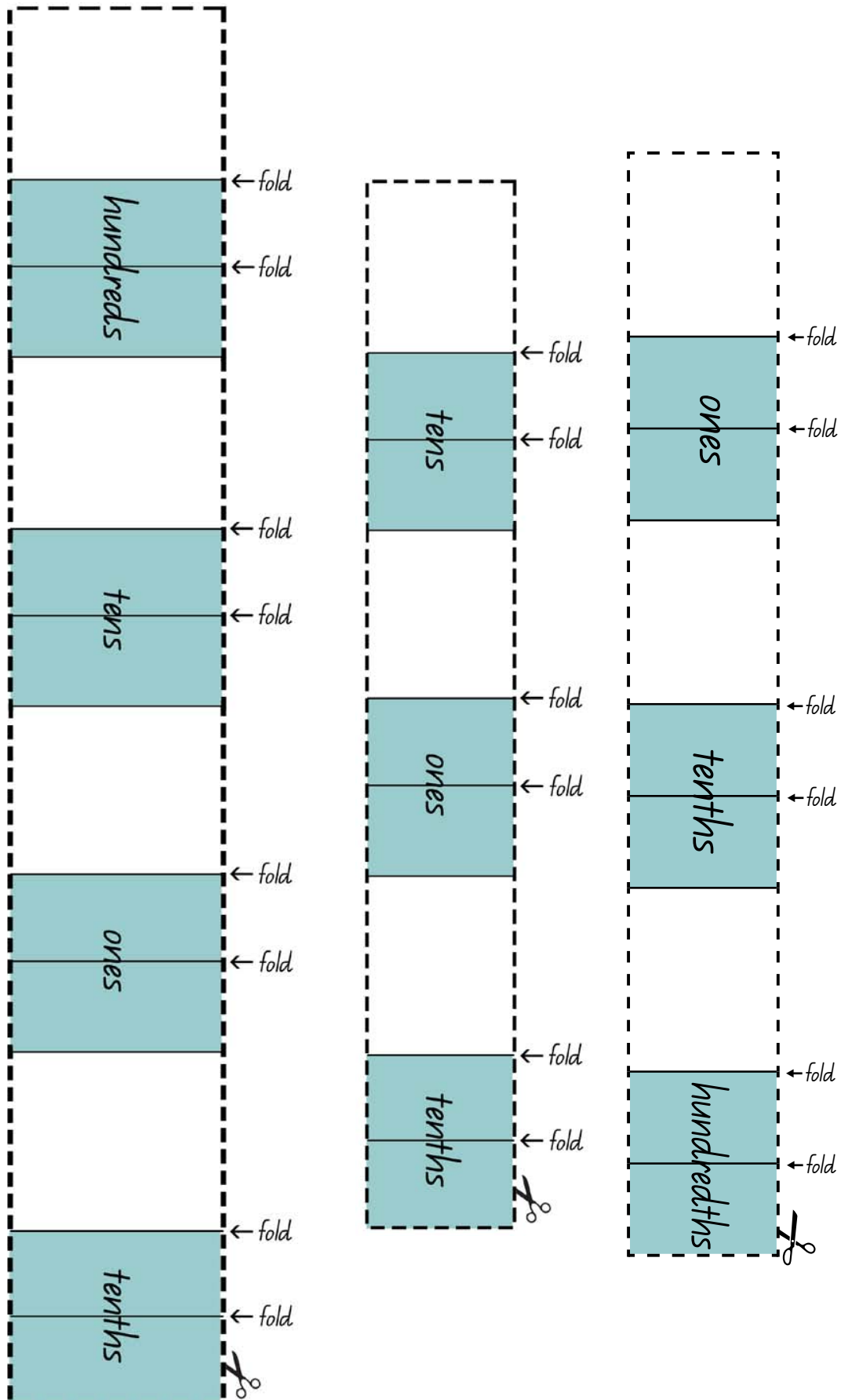
# Number expander — Tenths





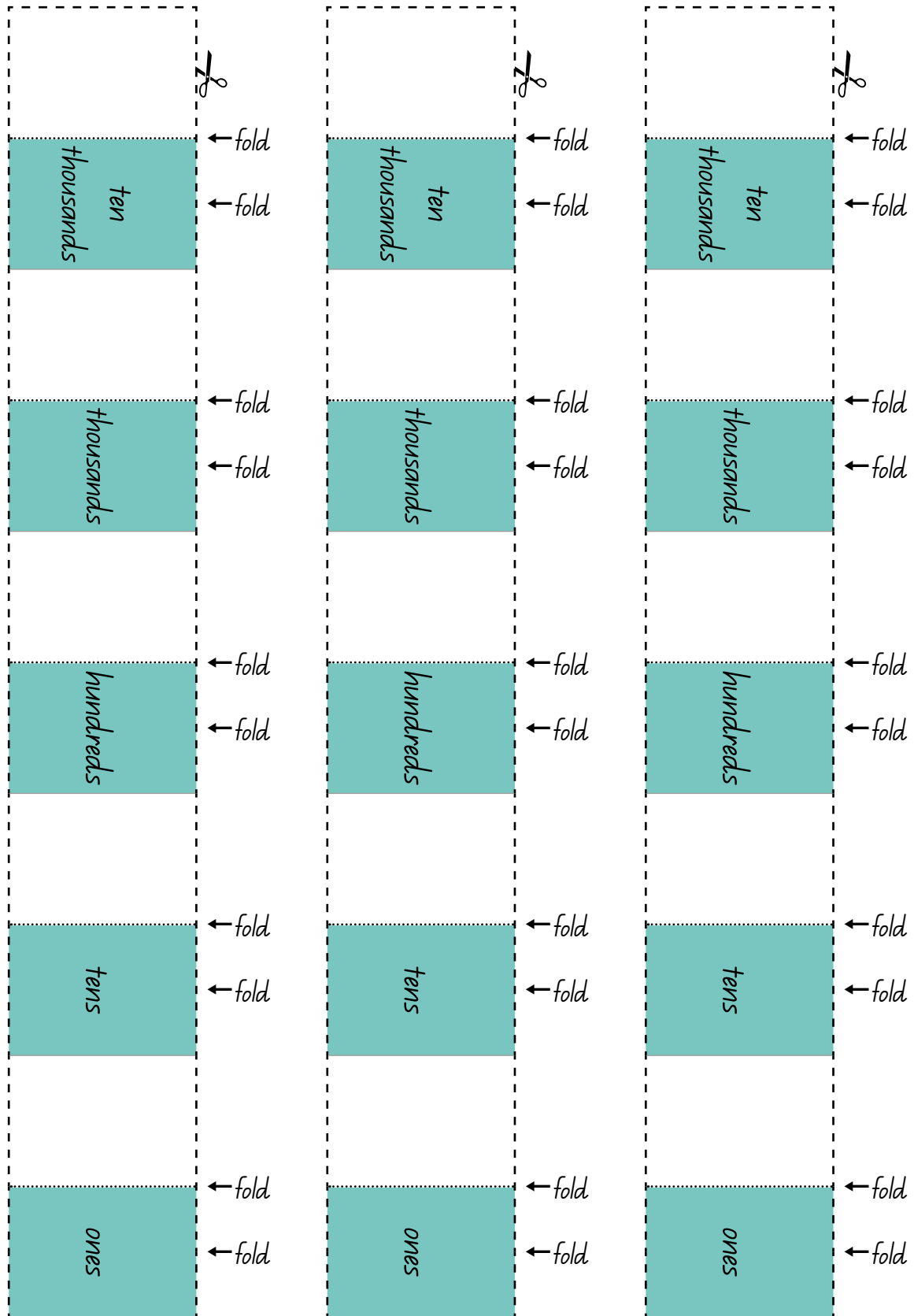


# Number expander — Hundredths



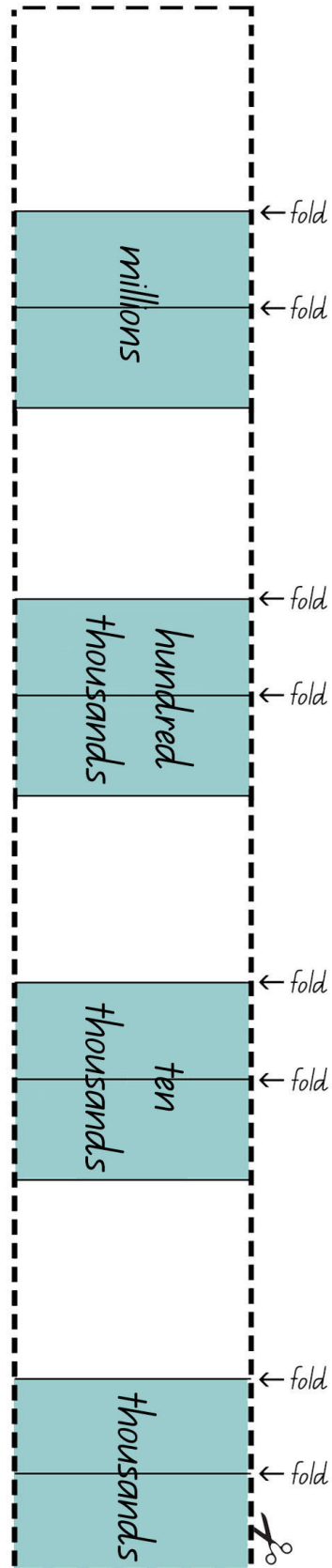
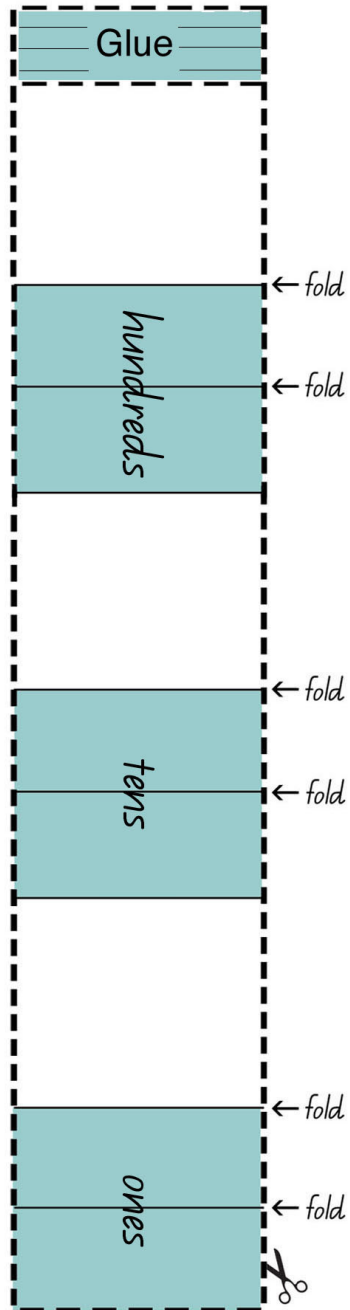


# Number expander — Ten thousands



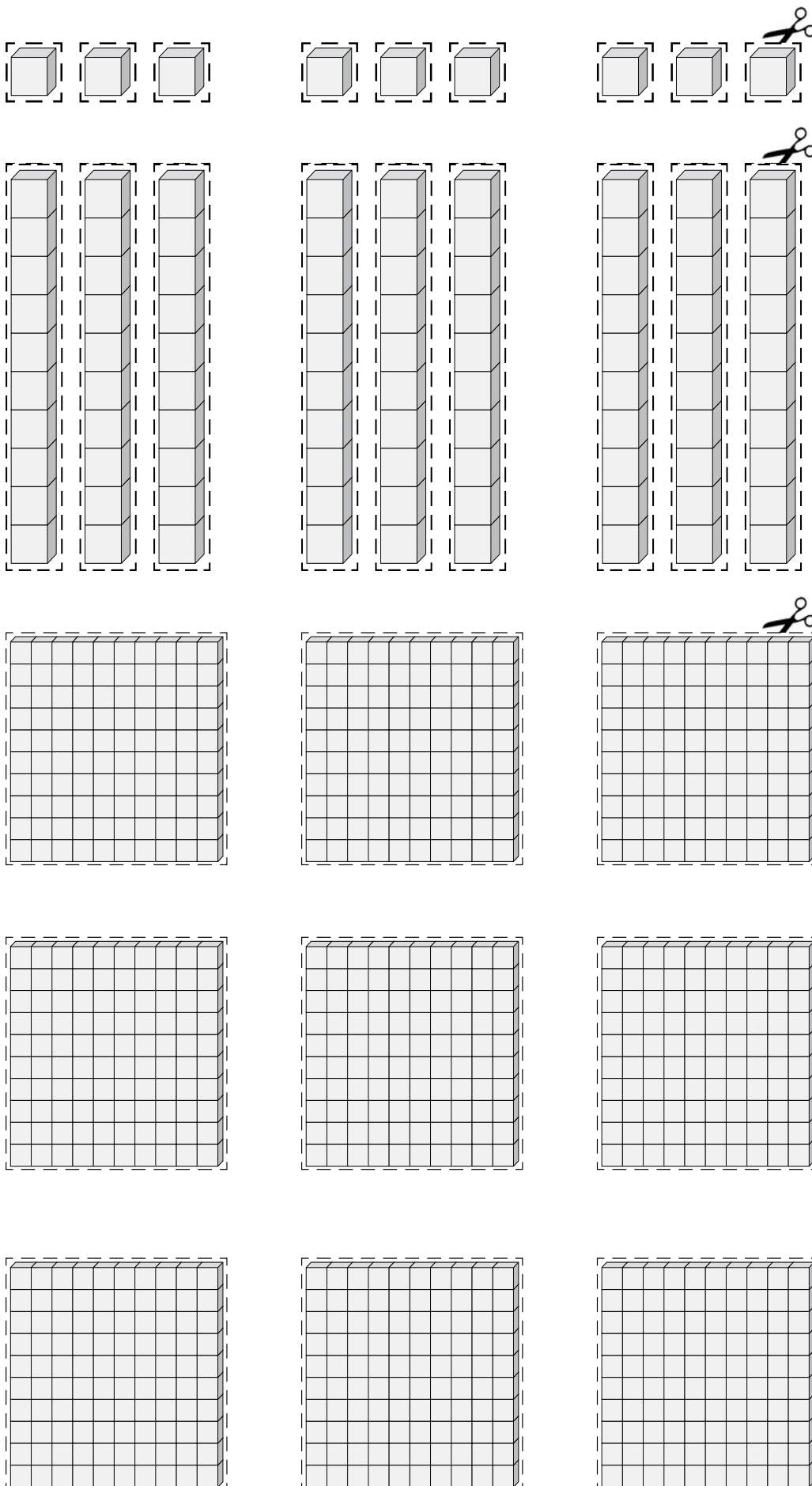


## Number expander — Millions



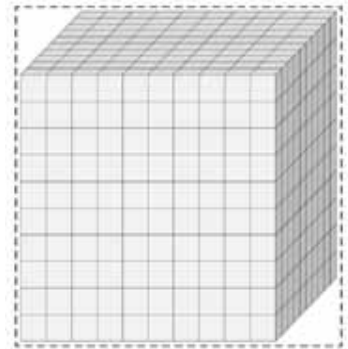
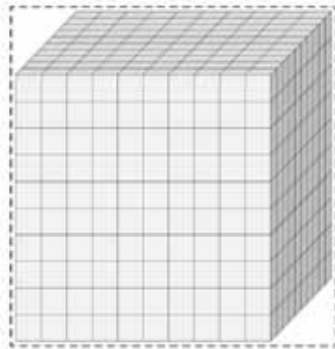
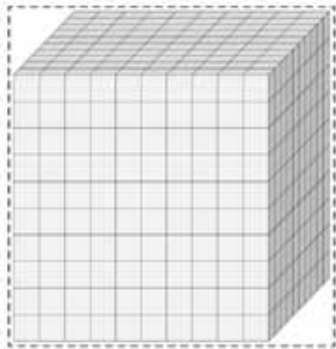
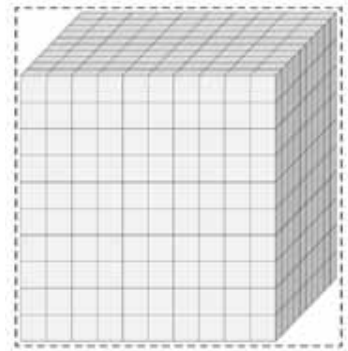
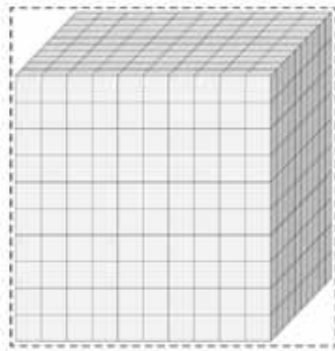
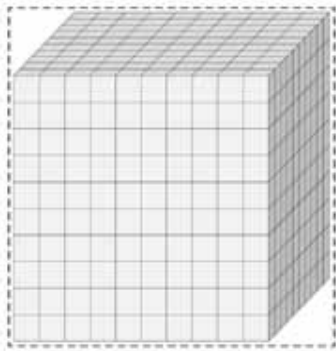
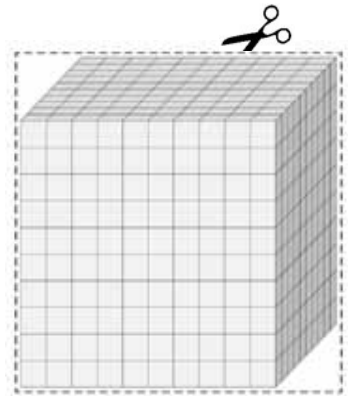
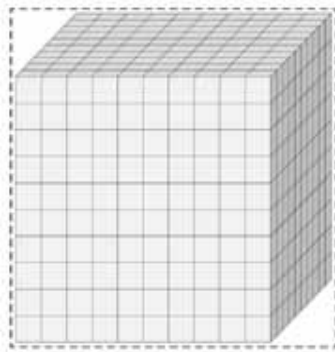
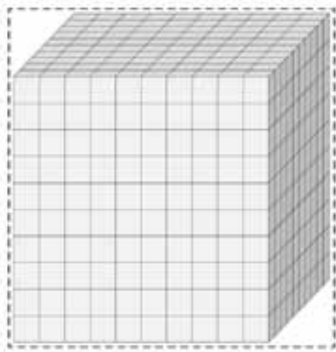


# Pictures of MAB







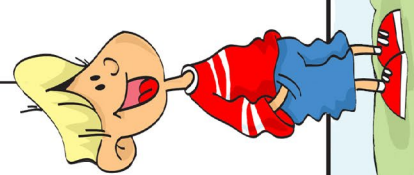




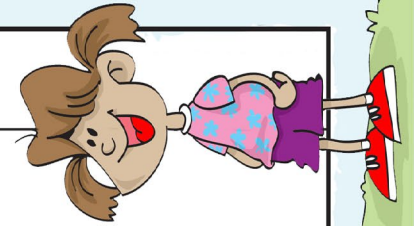
# Place value chart — Millions to thousandths

## Place value chart

Millions			Thousands			Ones		
Hundreds	Tens	Ones	Hundreds	Tens	Ones	Hundreds	Tens	Ones



Parts of one				
tenths	hundredths	thousandths		hundredths
		ones	tens	





## Place value chart — Thousands

Thousands	Hundreds	Tens	Ones



**Mathsercise** is a group of activities designed to support your students' knowledge of the number facts, number computation and content that underpins their understanding of mathematics.

The activities are organised into four sections:

- Today's number
- Number facts
- Let's calculate
- Everyday maths.

These activities may be used as regular routines in the form of five-minute revision sessions each day or to reinforce and revise concepts that student may have difficulty with. Doing the same activity multiple times will help the students work towards being flexible and confident mathematics learners.

**It may be useful to keep a separate Mathsercise book for students to use with these activities.**

## Today's number

With **Today's number**, students may choose a number or several numbers and then answer some of the activities.

### Number of the day

Have the students select and record a four- or five-digit number, for example:

5 268

Choose some activities from the following options:

#### Activities

- Say the number
- Write in words
- Write the place value of each digit
- Write the number on a number expander, close the number expander in different places and record the partitioning representations using number sentences, for example:  
 $5\,000 + 200 + 60 + 8$  or  $5\,200 + 68$
- Write the number before and after your four- or five-digit number
- 1 000 more than
- 100 less than
- 100 more than
- 10 less than
- Round to the nearest 1 000
- Round to the nearest 100

## Higher or lower

- Have a student (game leader) write a mystery number (up to five digits) on a piece of paper. Have the student show the tutor and then conceal it.
- Tell students the range of the mystery number, for example: 'The mystery number is between three digits and five digits' or 'The mystery number is larger than 10 but smaller than 50 000'. (Note: Students may benefit from further scaffolding by recording the range on the board as the game progresses).
- Students attempt to guess the mystery number by saying what number they think it is.
- The game leader is only allowed to respond with 'higher' or 'lower' (no other clues) until the target number is reached.
- Students continue to diminish the range of possible answers until the target number is identified.

## Number facts

To develop understanding of **Number facts**, students need opportunities to:

- practise facts so that they can recall facts with fluency
- look for number patterns
- learn related facts together.

When learning number facts students can nominate:

- facts I know well
- facts I do not know
- facts I can work out.

Visual models can be used to help students learn number facts and thoroughly develop knowledge.

## Card turnover — Addition and subtraction

*(a game for two or more players)*

### What you need

- Two packs of playing cards (remove all kings, queens, jacks and jokers; ace represents 1)

### What to do

- Place the cards in two piles facedown.
- Players take it in turns to turn over the top card from each pile and add the numbers, for example:  $6 + 3 = 9$ .
- If the answer is correct, the player keeps the cards. If the answer is incorrect, the next player can attempt to answer the problem.
- The winner is the player holding the most cards at the end of the game.



## Make a number

(a game for two players)

### What you need

- Two packs of playing cards (remove all kings, queens, jacks and jokers; ace represents 1)

### What to do

- Deal out all playing cards to both players. Players hold them facedown.
- Players take turns putting the cards face up in the middle alternately in two piles.
- The first player to recognise that the two cards showing can be added to 'Make seven', calls out 'Makes seven'. That player wins all the cards in the middle.
- The winner is the player who gains all the cards.

The game can be adapted to 'Make six', 'Make eight' or 'Make ...'. The purpose is to reinforce number facts.

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## Arrays game

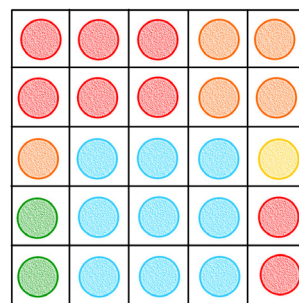
(a game for 2–5 players)

### What you need

- A 10 × 10 grid and access to counters for each player
- Two 1, 2, 3 dice

### What to do

- Roll two 1, 2, 3 dice. For each roll of the dice, have players use their counters to cover a portion of their grid as an array, for example:
  - If 3 and 2 are rolled, players cover a 2 × 3 or 3 × 2 array.
  - If 1 and 2 are rolled, players cover a 1 × 2 or 2 × 1 array.
- If a player cannot create an array in the remaining space on the grid, they wait for the next roll.
- The player who first fills their grid wins the game.

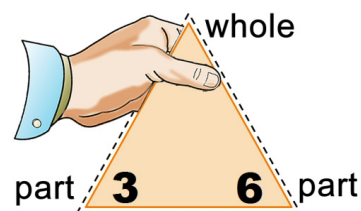


## Hidden values

Display fact family triangles with one value hidden. Discuss strategies for calculating the missing value, for example: to divide or to multiply.

Have students work with a partner, taking turns to:

- represent a multiplication fact in a fact family triangle
- cover one value on the triangle
- challenge the partner to calculate the missing value.



Students may use materials to help work out the hidden values.

## Multiple cover-up

(a game for 2–4 players)

Play *Multiple cover-up* to reinforce fluency of recall of multiplication facts.

Have each player list the first 10 multiples of the numbers 1 to 10 on separate paper strips. Each strip need to be large enough to allow a counter to be placed on each multiple.

For example:

7		21	28		42	49	56	63	70
---	--	----	----	--	----	----	----	----	----

## What you need

- Multiplication grid
- 10 counters for each player
- Two dice

## What to do

- Roll one or two dice to determine which set of multiples to play with; for example, if you roll a seven, work with the strip of multiples of seven.
- Players take turns to roll one or two dice (their choice).
- Multiply the total of the dice by the designated number.
- Place a counter over that multiple on the strip.
- If a number is not on the strip or has been covered with a counter, the player misses a turn.
- The first player to cover all multiples on their strip wins.

Multiplication grid

×	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50

Discuss, compare and give examples of the application of strategies for recall of multiplication facts. Make links to:

- related facts (commutativity principle), for example: *If I know  $7 \times 5$ , then I also know  $5 \times 7$ .*
- extended facts, for example: *If I know  $7 \times 5 = 35$ , then I also know  $70 \times 5 = 350$ ,  $7 \times 50 = 350$ ,  $70 \times 50 = 3500$  ...*

## Recall division facts

Demonstrate how to use a multiplication grid to locate answers for division questions, for example, for the problem  $54 \div 6$ :

- travel across the 6s row until 54 is reached
- travel up from 54 to find the correlating factor (9).

Identify the inverse relationship between multiplication and division, highlighting how recall of division facts is easily done by 'thinking multiplication'.

Multiplication grid

x	0	1	2	3	4	5	6	7	8	9	10
0	0	0	0	0	0	0	0	0	0	0	0
1	0	1	2	3	4	5	6	7	8	9	10
2	0	2	4	6	8	10	12	14	16	18	20
3	0	3	6	9	12	15	18	21	24	27	30
4	0	4	8	12	16	20	24	28	32	36	40
5	0	5	10	15	20	25	30	35	40	45	50
6	0	6	12	18	24	30	36	42	48	54	60
7	0	7	14	21	28	35	42	49	56	63	70
8	0	8	16	24	32	40	48	56	64	72	80
9	0	9	18	27	36	45	54	63	72	81	90
10	0	10	20	30	40	50	60	70	80	90	100

## Number fact shoot-out

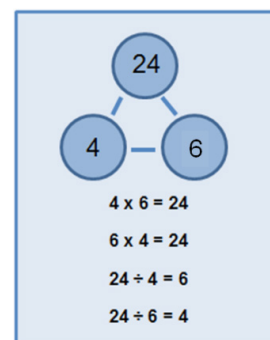
(a game for 2+ players)

Promote fluency of recall of division facts by playing games of speed and accuracy.

- Two players compete against each other.
- The teacher or game leader calls a division fact.
- The first player to answer correctly 'shoots' the other player and eliminates them.
- The losing player chooses a replacement player.
- Players repeat the process.
- The winner is the player still playing after a certain time period.

Make links to and practise extended facts, for example:

If I know  $12 \div 3 = 4$ , I also know  $120 \div 30 = 4$ ,  $120 \div 3 = 40$ ,  
 $1200 \div 30 = 40$  and  $1200 \div 300 = 4$ .



## Total speed

(a game for two players)

Play the game Total speed to reinforce fluency and accuracy of recall of facts.

### What you need

- Playing cards (remove all kings, queens, jacks and jokers; ace represents 1).

### What to do

- Shuffle and deal the deck of cards facedown between two players.
- Each player flips a card simultaneously onto the table.
- The first player to call out the correct total wins the pair of cards.
- The player who has all the cards at the end of the game is the winner.

Reinforce extended facts using materials such as tens dice, larger number dice or interactive dice. Construct a set of cards using tens, hundreds and thousands to use for extended number facts.

## **Card sharks**

*(a game for two players)*

Play the game Card sharks to reinforce fluency and accuracy of recall facts.

### **What you need**

- Playing cards (remove all kings, queens, jacks and jokers; ace represents 1)

### **What to do**

- Shuffle and divide the pack evenly between both players.
  - Each player keeps their pack facedown.
  - Both players take their top two cards from their respective packs and place them face up.
  - Each player adds their two cards together.
  - The player with the higher total wins the cards.
  - If the answer is the same, then a Number war is declared:
    - A Number war is where each player takes three cards from their pack and places them facedown on the table.
    - Each player then takes two more cards from their pack and places these face up on the table.
    - Each player adds their own two cards together.
    - The higher total wins all ten cards that have been placed on the table for the student for that hand.
-

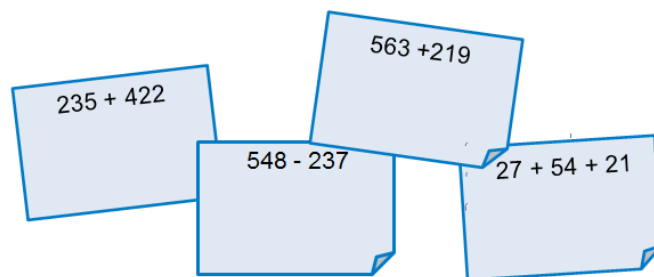
## Let's calculate

In the **Let's calculate** section, students develop computational fluency. When teaching for understanding, students can begin by using materials and visual representations and then move along to symbolic representations.

The use of materials is appropriate for assisting all students in their mathematical development. The use of materials will change as students become increasingly proficient.

## Number problems

Give each student a sheet of paper with a different addition (or subtraction) problem, for example:



Students solve their problem mentally, using materials or visual models if required. Each student records their personal method for solving the problem.

## Covers

Play the Covers game to consolidate students' understanding and confidence in partitioning smaller numbers.

### What you need

- A game board and a 10-sided dice
- A different coloured set of counters for each student

### What to do

- Students take turns to roll the 10-sided dice. Students partition each number rolled and cover these digits on the board; for example, for the rolled number 8, a player could cover the digits 4 and 4, or 6 and 2, or 1, 5 and 2.
- The first student to cover four digits in a straight line, using only their coloured counters, wins the game.

## Covers

2	1	3	5	3	7	5	4	5	1
6	5	2	5	5	1	3	5	2	3
1	3	4	6	8	4	6	8	1	5
4	7	1	7	3	2	1	4	8	3
5	3	7	8	3	4	6	3	6	1
7	4	6	2	5	1	5	2	6	4
2	7	4	6	3	6	4	6	1	8

## Solving word problems

Present addition and subtraction word problems involving two-digit numbers. Include bridging for addition once this has been introduced. Do not include bridging for subtraction.

Example word problems:

- *Joe planted 35 seedlings on Saturday and 21 seedlings on Sunday. How many seedlings did he plant altogether?*
- *Hannah bought a box of 25 doughnuts. She gave 12 to her sister. How many doughnuts did Hannah have left?*

Have the students:

- use the SCAN–THINK–DO strategy
- attempt a mental calculation first
- represent both numbers with base-10 modelling materials to confirm the sum
- record the strategy using an informal written method.

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## Thinkboards

Present students with a variety of two-digit and three-digit addition problems, for example:

*Demi went to the movies twice to see 'Tiger Queen'. The first time she counted 187 people in the cinema. The second time she counted 253 people. How many people did Demi count altogether?*

Have the students:

- draw a simple thinkboard (see example below)
- copy the number story into one cell of the thinkboard.



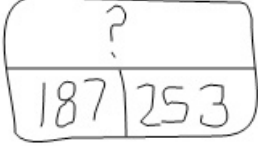
Discuss the problem.

Identify the values as parts and whole, for example: 187 as one part and 253 as the other part (the whole is unknown).

Identify the missing value, for example: the total number of people.

Have the students complete the thinkboard with different representations for the same situation, including:

- a drawing
- a part–part–whole model
- a number sentence.


<i>Demi went to the movies twice. The first time she counted 187 people. The second time she counted 253 people. How many people did Demi count altogether?</i>	<p>Day 1 : 187 people watching</p>  <p>Day 2 : 253 people watching</p> 
	$187 + 253 =$

## Practise strategies

Provide a selection of number problems for students to solve using mental computation strategies, for example:

$56 + 78$	$34 + 49$	$83 + 59$	$66 + 36$
$324 + 457$	$420 + 420 + 420$	$526 + 763$	$975 + 120$

Have students practise mental computation strategies of jump, split and compensate, for example:

$623 + 305$ $623$ $723$ $823$ $923$ $928$  Jump strategy	$\begin{array}{r} 623 + 305 \\ \hline 600 + 300 = 900 \\ 23 + 5 = 28 \\ \hline 928 \end{array}$ Split strategy	 $623 + 305$ $623 + 300 = 923$ Add the extra 5 $\underline{\quad\quad\quad}$ $928$ Compensate strategy
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Remind students about the efficiency of mental computation. Practise using each of the strategies for fast and accurate recall.

## Everyday maths

In **Everyday maths** students can be asked any practical mathematical questions that will help them in everyday life.

### Time

Have the students use a calendar (for the current year) to:

- identify today, tomorrow, yesterday, day after, day before, next week, last week
- order months of the year
- identify which season we are in
- identify day, date and month
- find the number of days in June
- find the number of days until ... (pick a date, for example: a birthday or holiday).

## **Duration of time**

Have the students make comparisons of durations of time, for example:

- short/long time, shorter/shortest time, longer/longest time
  - fast/slow
  - activities that take a month, a week, a day, an hour
  - use a clock (analog and digital)
  - ask about o'clock and half past, quarter to/past times.
- 

## **Length**

Have the students make comparisons of objects and distances, for example:

- longer/shorter/longest/shortest
  - wider/narrower/widest/narrowest
  - thicker/thinner/thickest/thinnest
  - taller/shorter/tallest/shortest.
- 

## **Capacity**

Have the students make comparisons of objects/containers that:

- are full/empty
  - hold more than/hold less than
  - hold as much as
  - hold the most/hold the least.
- 

## **Location**

Have the students follow directions by moving:

- forwards/backwards/sideways
  - left/right
  - clockwise/anticlockwise
  - a half/quarter turn.
- 

## **Area**

Have the students make comparisons of shapes that:

- cover more/less
  - have a larger/smaller area
  - have a larger/smaller surface.
-



## **Mass**

Have the students make comparisons of objects that:

- weigh more/less
  - weigh the same
  - are heavier/lighter than
  - are heaviest/lightest.
- 

## **Money**

Have the students use collections of money to:

- identify Australian coins and their value
- describe features of coins
- count collections of coins (5c, 10c, \$1, \$2)
- identify familiar coin combinations.

