NZ Mathematics Curriculum

Parent Information Evening
20 March 2025

Number Hunt - while you are waiting!

You have 3 digits 3 3 5
You must use all three digits in each number sentence

11	**38**	**50**
45	**14**	**5**
32	**5**	**43**

e.g. 3 + 3 + 5 = 11

Can you solve all 9?

And the answers are …

$11 = 3 + 3 + 5$

$38 = 33 + 5$

$50 = 53 - 3$

$45 = 3 \times 3 \times 5$

$14 = 5 + 3 \times 3$

$5 = 3 \times 5 \div 3$

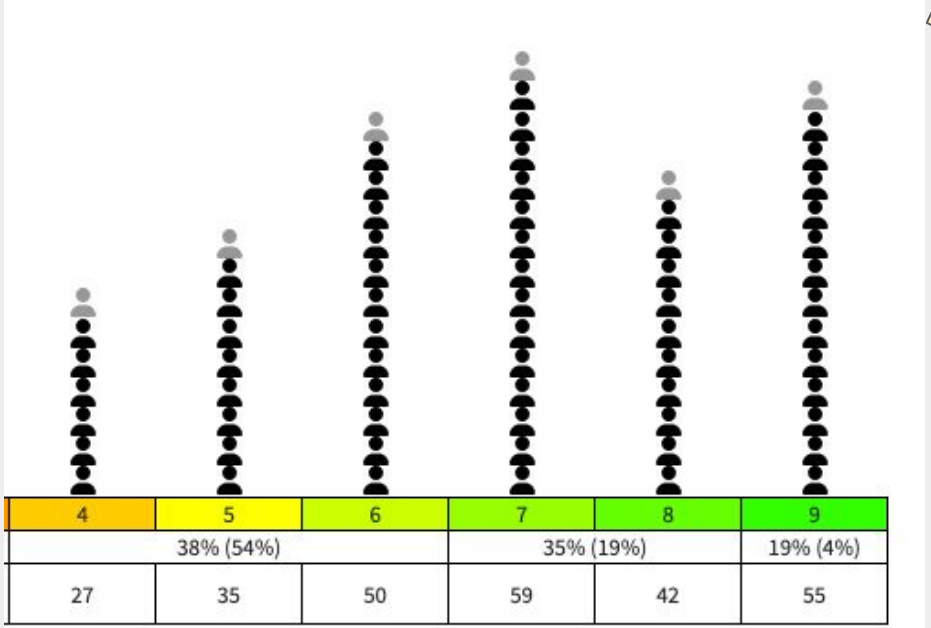
$32 = 3^3 + 5$

$5 = \frac{3}{3} \times 5$

$43 = 5! \div 3 + 3$

Our maths achievement

PAT data from years 3-8 shows that our students are achieving well above the national norm.

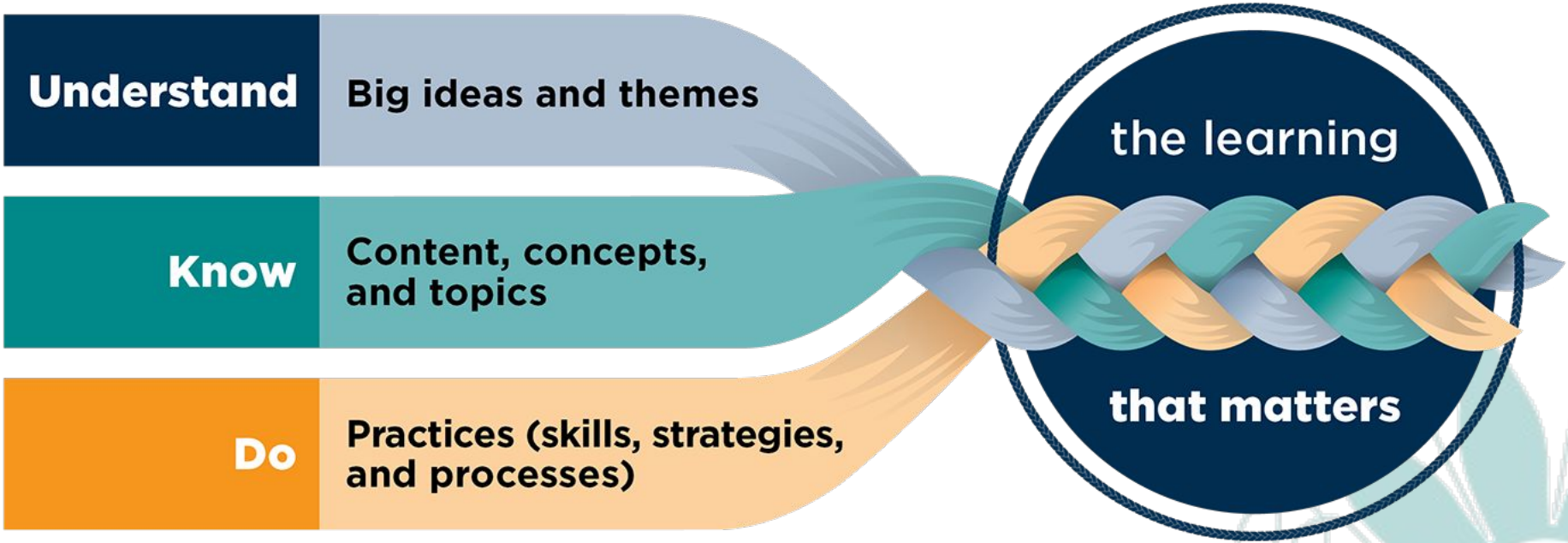


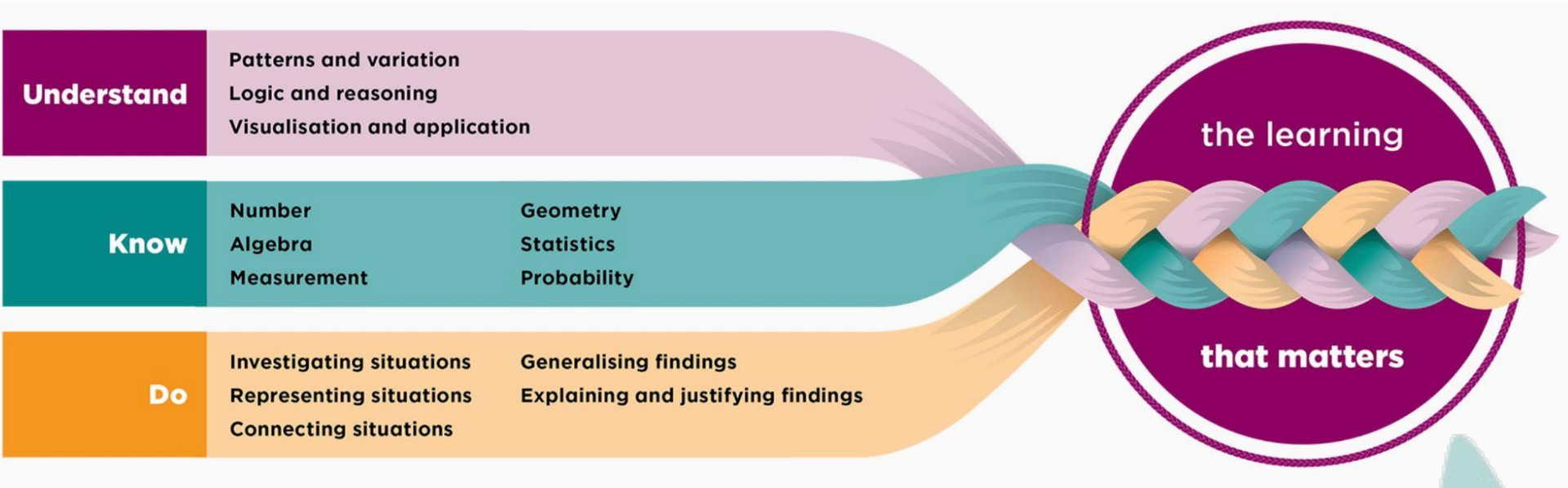
58% of students achieved stanine 7 and above
***norm is 23%**

Supporting our learners:

- Extension programmes
- Mastery lessons through Oxford
- Targeted and specific teaching to fill gaps

New Zealand Curriculum




Understand
Patterns and variation
Logic and reasoning
Visualisation and application
Know
Number
Algebra
Measurement
Geometry
Statistics
Probability
Do
Investigating situations
Representing situations
Connecting situations
Generalising findings
Explaining and justifying findings
the learning
that matters

Understand describes the deep and enduring mathematical and statistical **big ideas**

Patterns and variation

The world is full of patterns and is defined by a multitude of relationships in which change and variation occur. Mathematics and statistics provide structures that are useful for **noticing, exploring, and describing different types of patterns and relationships**, enabling us to generate insights or make conjectures.

Logic and reasoning

By engaging with mathematical concepts, we develop l**ogical reasoning** and **critical thinking** skills that enable us to **evaluate information, question assumptions, and present arguments** with clarity. Statistical reasoning from observation and theory allows us to differentiate what is probable from what is possible and to draw reliable conclusions about what is reasonable.

Visualisation and application | Te whakakite me te whakatinana

The visualisation of mathematical and statistical ideas profoundly influences how we **perceive, understand, and interact with abstract concepts**. Application in mathematics and statistics involves creating structures and processes that help us understand complex situations, enabling better decision making and communication of ideas.

Do describes the **processes** that are fundamental to all mathematical and statistical activities and that underpin students' learning of the big ideas, concepts, and procedures.

Investigating situations

Describe and explore situations to build understanding.

Decide which approaches, concepts, and tools to use and how to use them.

Possibly begin with a question or focus of interest and proceed in systematic but flexible ways

Evaluating the investigation

Representing situations

Use words or symbols and mental, oral, physical, digital, graphical, or diagrammatic ways to show concepts and findings.

Use representations to compare, explore, simplify, illustrate, prove, and justify, as well as to look for patterns, variations, and trends.

Connecting situations

Recognise and make links by noticing similarities and differences.

Connecting helps us to understand the relationships between concepts and procedures in mathematics and statistics.

Generalising findings

Move from specific examples to general principles.

Ue the patterns, regularities, and structures that we find to make conjectures that might apply to other situations.

Further investigation can test and refine these conjectures and determine if they apply in all cases.

Explaining and justifying findings

Use mathematical and statistical ways of communicating and reasoning to share our ideas and to respond to the ideas, reasoning, and inferences of others.

Explaining is how we communicate our inferences and conjectures, build arguments, and unpack stories from data.

Justifying involves describing why decisions and findings are reasonable, taking into account limitations arising from assumptions and choices and the evidence on which findings are based.

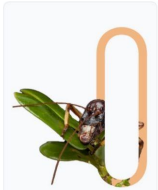
Oxford as resource to support curriculum implementation

Phase 1

Phase 1
Years 0 – 3

Thriving in environments rich in literacy and numeracy
Te tupu pāhautea i te taiao ako e haumako ana i te reo matatini me te pāngarau

Download sample resources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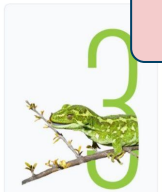
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Phase 2

Phase 2
Years 4 – 6

Expanding horizons of knowledge and collaborating
Te whakawhānui i ngā pae o te mātauranga, me te mahi tahi

Download sample resources


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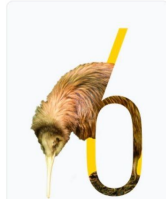
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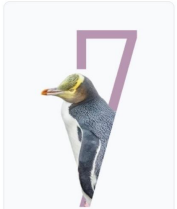
Phase 3

Phase 3
Years 7 – 8

Seeing ourselves in the wider world and advocating with and for others
Te aro atu ki te ao whānui me te kōkiri kaupapa hei hāpai tahi i ētahi atu

Download sample resources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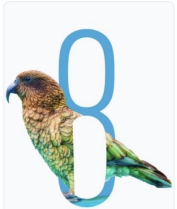
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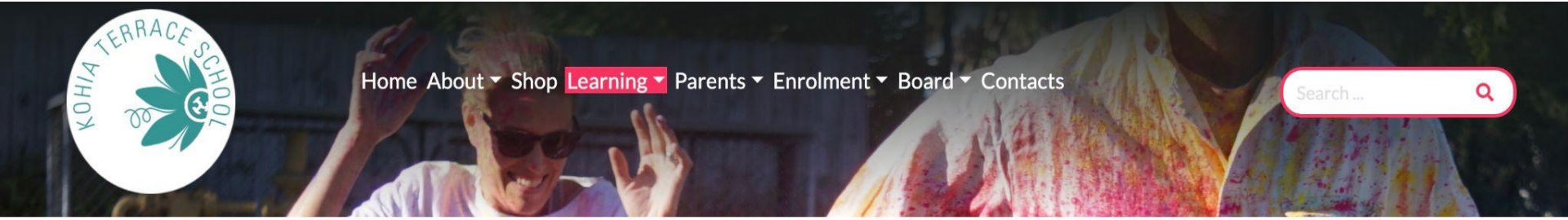
SPOT PRIZE

Let’s find out more about a maths lesson for your child’s kapa:

		
Mary	Angela	Laura



Learning
Learning at home
More about Maths
Literacy at KTS
Curriculum Update
Health Education - Sexuality Education

Latest newsletters

2025

4 March
25 February
18 February
11 February
4 February

More about Maths

As a school, we understand and appreciate that our parent community is committed to helping their children to become strong and confident in their mathematical learning. The aim of this section is to support you in this through:

- Links to true and tested websites that consolidate number knowledge
- Links to videos of games to support quick recall of basic facts

Basic Facts

You have probably heard how important it is for children to know their basic facts in order to make progress in maths. But what exactly are they?

- Addition/subtraction basic facts refer to all the additions (and the corresponding subtractions) that can be made up to 20: from 1 + 1 = 2 right through to 19 + 1 = 20.
- Multiplication/division basic facts refer to all the possible multiplications (and the corresponding divisions) between numbers up to 10: from 1 × 1 = 1 through to 10 × 10 = 100.

Knowing these facts off by heart enables students to free up space in their minds so that they can complete more complex mathematical thinking without having to dedicate brainpower to 'working out' the basics. Once a student understands the maths behind the basic facts, such as what addition or multiplication involve, they can begin to recognise the patterns and relationships between the numbers they are working with. This is the beginning of what is often termed as number sense. A combination of quick fact recall and good number sense supports students to approach problems by applying this

Supporting reading, writing and maths at home

Website

Maths at home

Talk together and have fun with numbers, shapes, games, and patterns

Help your child to:

- find and read large numbers in your environment for example, 9,000, 300 and 23
- count forwards and backwards starting with numbers like 1,098, 1,099, 1,100, 1,101 then back again
- make patterns when counting – forwards and backwards, starting with different numbers (73, 83, 93, 103... or 118, 108, 98, 88 and so on)
- find families of facts when multiplying and dividing with 3 and 4, for example, if your child knows 3 × 4 = 12, then they will also know that 4 × 3 = 12, 12 ÷ 4 = 3 and 12 ÷ 3 = 4
- estimate the size of objects using tools they have available, like the width of their hand or the length of their foot
- work out patterns – make codes from numbers
- notice the right angles and lines around you.

Tip

Be positive about maths and show your child where you use maths. This will help them build confidence in maths. Praise their effort.

Use easy, everyday activities

Involve your child in:

- making and organising lunch or a meal for a party or a hui, including equal sharing of fruit, biscuits, sandwiches, or drinks
- choosing items to weigh at the supermarket, for example, how many apples or bananas weigh a kilo? Look for the best buy between different makes of the same items, for example, blocks of cheese, or check on the amount of sugar or salt per serving
- telling the time to the nearest 5 minutes
- deciding how much money to pay the parking meter and what time you will need to be back before the meter expires
- remembering series of numbers, for example, thinking about how many phone numbers they can remember or talk about what they do to help them remember
- looking for numbers, shapes, measurements, graphs and other maths ideas when reading together
- using a map or app to plan a route to a new location
- looking at a weather forecast and talking about the chance of rain, sun and so on.
- wrapping up presents or packaging items to be posted.

Tip

Maths is an important part of everyday life and there are lots of ways you can make it fun for your child.

How can parents help at home?

Basic facts practice

Having good number sense and basic fact recall will help students learn maths as they will see patterns more easily and can spend time on strategies rather than number knowledge.

	Addition and Subtraction	Multiplication and Division
Year 0	Recall **addition and subtraction facts up to 10**	
Year 1		
Year 2	Recall **addition and subtraction facts up to 20**	
Year 3		Recall multiplication and division facts for: **2, 3, 5,10**
Year 4		Recall multiplication and division facts for **2, 3, 4, 5, 6, 10**
Year 5		Recall **ALL multiplication and division facts up to 10x10**
Year 6		
Year 7		
Year 8		

Home Learning

Year 1:

- Correct number formation
- Maths rings
- Later in the year there will be some maths sheets

Year 2:

- Maths booklet (~ two a term) of activities aligned with Oxford maths sequence

Year 3:

- Fortnightly math activities (aligned with Oxford) that reinforce what is being taught in class along with basic facts.

Home Learning

Year 4:

- 60 minutes per week on SmartLab (mathematics) or other maths tutoring equivalent
- 10 word problems to solve over the fortnight

Year 5:

- aim to extend student's knowledge and use of different maths skills through more practical activities that have links to our Year 5 content in class

Year 6:

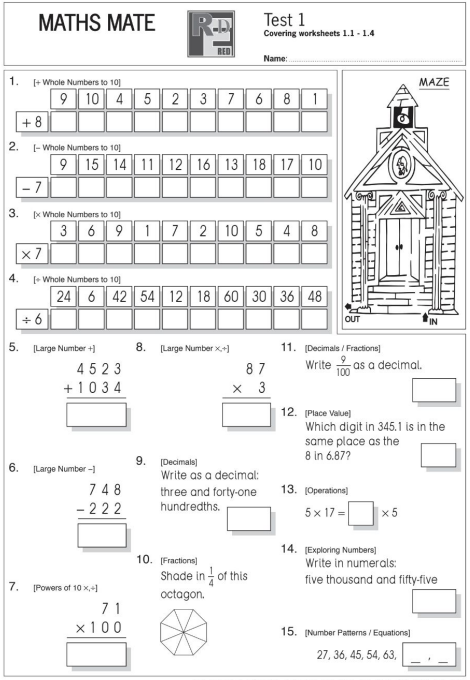
- SmartLab math tutorials or tasks to complete and / or additional mental math tasks

Home Learning

Blue, green, mauve, red or yellow

+ Provide students with regular, cyclical mathematical practice.

+ Track and record your students' strengths.


MATHS MATE

Test 1
Covering worksheets 1.1 - 1.4

Name:

1. [+ Whole Numbers to 10]

9	10	4	5	2	3	7	6	8	1
+ 8									

2. [– Whole Numbers to 10]

9	15	14	11	12	16	13	18	17	10
– 7									

3. [× Whole Numbers to 10]

3	6	9	1	7	2	10	5	4	8
× 7									

4. [÷ Whole Numbers to 10]

24	6	42	54	12	18	60	30	36	48
÷ 6									

MAZE

OUT

IN

5. [Large Number +]

4523
+ 1034

6. [Large Number –]

748
– 222

7. [Powers of 10 ×,÷]

71
× 100

8. [Large Number ×,÷]

87
× 3

9. [Decimals]
Write as a decimal:
three and forty-one hundredths.

10. [Fractions]
Shade in $\frac{1}{4}$ of this octagon.

11. [Decimals / Fractions]
Write $\frac{9}{100}$ as a decimal.

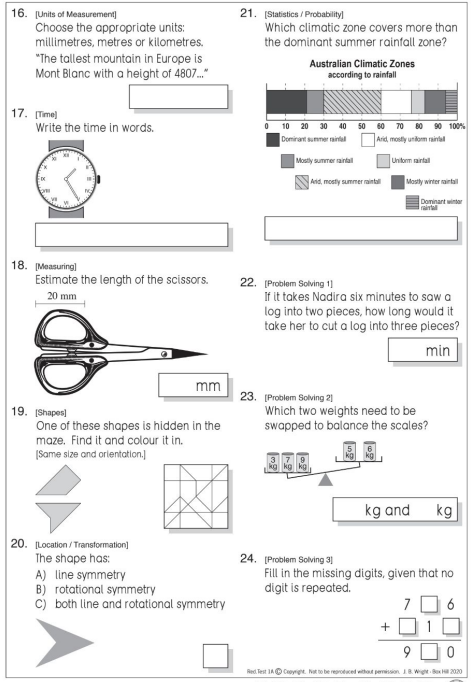
12. [Place Value]
Which digit in 345.1 is in the same place as the 8 in 6.87?

13. [Operations]
5 × 17 = ☐ × 5

14. [Exploring Numbers]
Write in numerals:
five thousand and fifty-five

15. [Number Patterns / Equations]
27, 36, 45, 54, 63, ☐, ☐

page 1


16. [Units of Measurement]
Choose the appropriate units: millimetres, metres or kilometres.
"The tallest mountain in Europe is Mont Blanc with a height of 4807…"

17. [Time]
Write the time in words.

18. [Measuring]
Estimate the length of the scissors.
20 mm
mm

19. [Shapes]
One of these shapes is hidden in the maze. Find it and colour it in.
[Same size and orientation.]

20. [Location / Transformation]
The shape has:
A) line symmetry
B) rotational symmetry
C) both line and rotational symmetry

21. [Statistics / Probability]
Which climatic zone covers more than the dominant summer rainfall zone?
Australian Climatic Zones according to rainfall
0 10 20 30 40 50 60 70 80 90 100%
Dominant summer rainfall
Arid, mostly uniform rainfall
Mostly summer rainfall
Uniform rainfall
Arid, mostly summer rainfall
Mostly winter rainfall
Dominant winter rainfall

22. [Problem Solving 1]
If it takes Nadira six minutes to saw a log into two pieces, how long would it take her to cut a log into three pieces?
min

23. [Problem Solving 2]
Which two weights need to be swapped to balance the scales?
3 kg, 7 kg, 9 kg, 5 kg, 6 kg
kg and kg

24. [Problem Solving 3]
Fill in the missing digits, given that no digit is repeated.

7 ☐ 6
+ ☐ 1 ☐
9 ☐ 0

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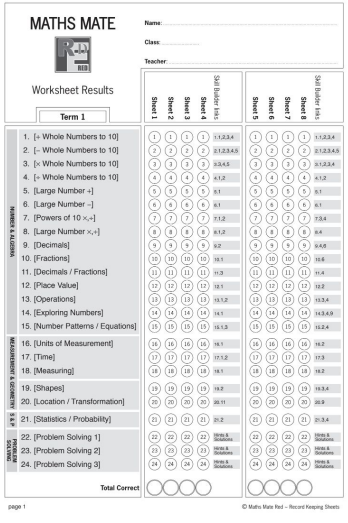
page 2

+ Students systematically revise all skills related to the key mathematical strands at their level.

+ An excellent assessment tool.

One double sided sheet each week

Due in each Monday


MATHS MATE

Name:
Class:
Teacher:

Worksheet Results

Term 1

	Sheet 1	Sheet 2	Sheet 3	Sheet 4	Skill Builder Links	Sheet 5	Sheet 6	Sheet 7	Sheet 8	Skill Builder Links
1. [+ Whole Numbers to 10]	1	1	1	1	1.1,2,3,4	1	1	1	1	1.1,2,3,4
2. [– Whole Numbers to 10]	2	2	2	2	2.1,2,3,4,5	2	2	2	2	2.1,2,3,4,5
3. [× Whole Numbers to 10]	3	3	3	3	3.3,4,5	3	3	3	3	3.1,2,3,4
4. [÷ Whole Numbers to 10]	4	4	4	4	4.1,2	4	4	4	4	4.1,2
5. [Large Number +]	5	5	5	5	5.1	5	5	5	5	5.1
6. [Large Number –]	6	6	6	6	6.1	6	6	6	6	6.1
7. [Powers of 10 ×,÷]	7	7	7	7	7.1,2	7	7	7	7	7.3,4
8. [Large Number ×,÷]	8	8	8	8	8.1,2	8	8	8	8	8.4
9. [Decimals]	9	9	9	9	9.2	9	9	9	9	9.4,6
10. [Fractions]	10	10	10	10	10.1	10	10	10	10	10.6
11. [Decimals / Fractions]	11	11	11	11	11.3	11	11	11	11	11.4
12. [Place Value]	12	12	12	12	12.1	12	12	12	12	12.2
13. [Operations]	13	13	13	13	13.1,2	13	13	13	13	13.3,4
14. [Exploring Numbers]	14	14	14	14	14.1	14	14	14	14	14.3,4,9
15. [Number Patterns / Equations]	15	15	15	15	15.1,3	15	15	15	15	15.2,4
16. [Units of Measurement]	16	16	16	16	16.1	16	16	16	16	16.2
17. [Time]	17	17	17	17	17.1,2	17	17	17	17	17.3
18. [Measuring]	18	18	18	18	18.1	18	18	18	18	18.2
19. [Shapes]	19	19	19	19	19.2	19	19	19	19	19.3,4
20. [Location / Transformation]	20	20	20	20	20.11	20	20	20	20	20.9
21. [Statistics / Probability]	21	21	21	21	21.2	21	21	21	21	21.3,4
22. [Problem Solving 1]	22	22	22	22	Hints & Solutions	22	22	22	22	Hints & Solutions
23. [Problem Solving 2]	23	23	23	23	Hints & Solutions	23	23	23	23	Hints & Solutions
24. [Problem Solving 3]	24	24	24	24	Hints & Solutions	24	24	24	24	Hints & Solutions
Total Correct										

page 1

© Maths Mate Red – Record Keeping Sheets

Assessment and Reporting

Hero Learning Goals and Assessment

NZ Scope and Sequence

MEASURING: Tell the time to the nearest 5 minutes, using the language of 'minutes past the hour' and 'to the hour'.

MEASURING: Use appropriate units to describe length, mass (weight), capacity, and time.

MEASURING: Measure body parts (e.g., the arm) or familiar objects and use these as benchmarks to estimate and then measure length, mass (weight), capacity, and duration, using appropriate metric or time-based units.

OPERATIONS: Add and subtract two- and three-digit numbers.

NUMBER STRUCTURE: Skip count from any multiple of 100, forwards or backwards in 25s and 50s.

NUMBER STRUCTURE: Identify, read, write, compare, and order whole numbers up to 10,000, and represent them using base 10 structure.

Goals set for a term
5 week review

SEE RECENTLY COMPLETED

Moving to a dial per year group
25% of overall goals for the year
per term

Questions?

Thank you for joining us

Please return pencils / pens to the front?

If you could help stack chairs it would be most appreciated