Just-in-Time Maths

Vignette

9

Retention - Rapid Routines

THE LEARNER FIRST™

Rapid routines – supporting retention

Opportunities to learn

Planning reactivation
Sequencing tasks/lessons
Assessing ‘on the run’

NZ Curriculum:
Effective Pedagogies

Principle 6: Promote fluency and transfer

Full fluency is important and can be developed in two ways:

a) Short everyday practice of mental processes
b) Reinforcing and prompting transfer of learnt skills

Professor Peter Sullivan
6 Principals for effective teaching

Fluency

Quick and efficient recall of facts, definitions and procedures and the flexibility to move between different contexts and representations of mathematics

National Council Maths Teachers
5 ideas in teaching for mastery

Rapid routines maximise retention for ākonga

	Concept	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
Number & Algebra	Number Strategies										
	Number Knowledge (place value)										
	Number Knowledge (frac/%/ratios)										
	Equations and expressions										
	Patterns and relationships										
Measurement and Geometry	Measurement (conversions)										
	Measurement (length, mass)										
	Measurement (angles)										
	Measurement (time)										
	Measurement (perimeter & area)										
	Measurement (volume)										
	Shape										
	Position and direction										
	Transformation										
Statistics	Statistical Investigations										
	Statistical literacy										
	Probability										

NZ Maths unit plans
2 week, 5 week etc

Rapid Routines
3 x 10 min a week

Rapid routines help us with these questions

Have we got struggling learners?

Who are they?

What are they struggling with?

Why are they struggling?

Are these factors in our control?

How can we :

- diagnose these quickly?
- easily build them into our routines?
- include all proficiencies?
- have immediate insights?

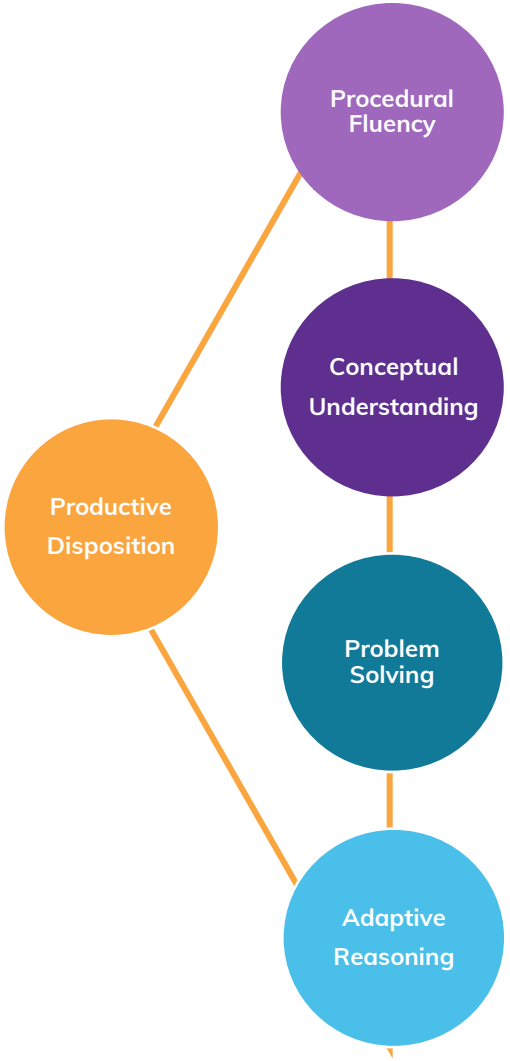
Rapid routines can be created from elaborations

NA3-4 Know how many tenths, tens, hundreds, and thousands are in whole numbers.

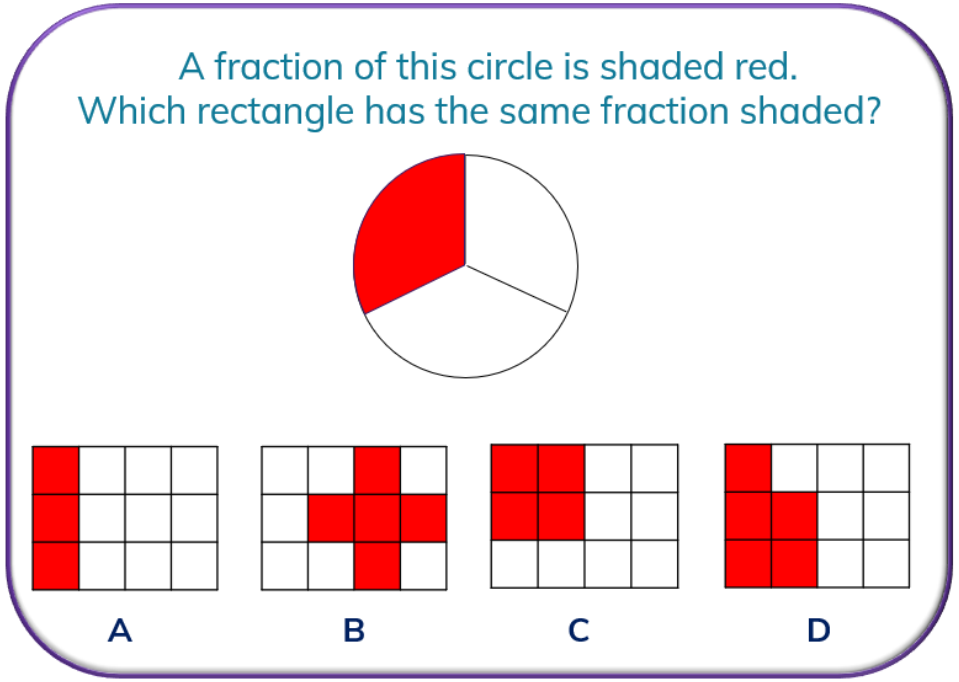
- Have a multiplicative view of whole number place value. In 239 456 the 3 means 3 groups of 10 000
- Understanding the Base 10 scaling view- 10 of these is 1 of those- as digits move right or left
- Understands the nested view e.g., 239 456 has 23 ten thousand, 2394 hundreds, and 23 945 tens.
- Expose to exercises like this: 2004 – 700 requires us to think of 1000 as ten hundreds so 20 hundred take 7 hundred
- Know one hundred thousand is ten times as much as ten thousand, and one hundred is result of dividing one thousand by ten. Eg 4200 is ten times more than 420, 43 divides by 10 is 4.3

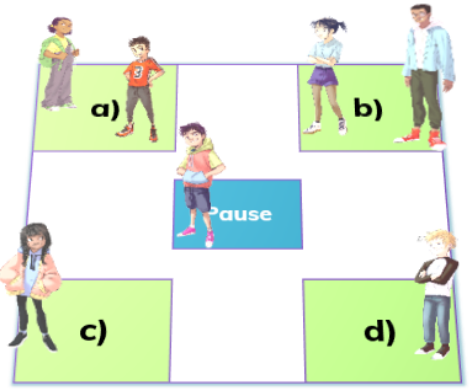
Monday	Wednesday	Friday
How many tens altogether in 450?	How many hundreds altogether in 15 000	How many tenths altogether in 1.5?
What number comes next? 1250, 1150, 1050, ?	What number comes next? 0.7, 0.8, 0.9, ?	What number comes next? 10 200, 10 100, 10 000
What has been added to 750 000 to make 850 000?	What has been subtracted from 1 000 000 to make 100 000?	What has ten thousand been divided by to make one hundred?
Choose one question where ākonga have opportunities to communicate and share their thinking, their methods, their language. Kaiako can use insights to assist future planning of questions.		

Rapid routines most popular delivery methods

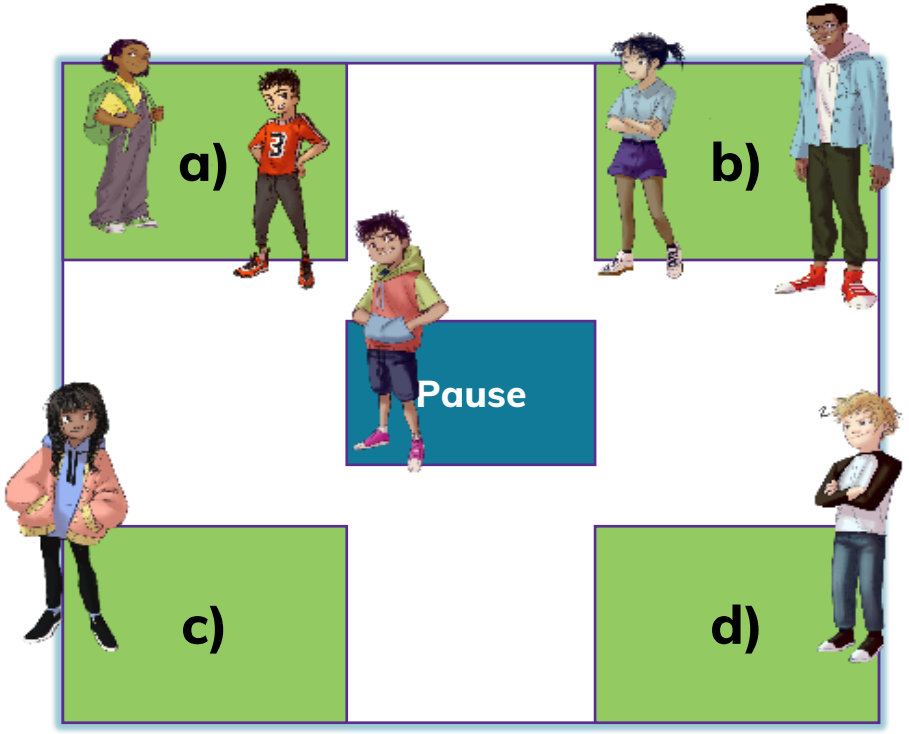


moveNprove





moveNprove are a proving popular with kaiako and ākonga



The corner- solutions are explained *(words, drawings, manipulatives)*

The pause- solutions without explanations or unable to arrive at a solution yet.

Which of these has the largest value?

a. 0.2
b. 0.02
c. 0.22
d. 0.202

The question- a key concept that has 4 answers – 3 incorrect and 1 correct eg three truths and a lie

Kaiako have been adapting questions as well as creating and sharing their own.

moveNprove© are a proving popular with kaiako and ākonga

Ākonga have a short time to individually think about where they would like to go

Ākonga are invited to move again.
Kaiako invite “movers’ to explain their reasoning

Kaiako invite responses from each corner to elicit understandings.

Data is captured.

The answer is not given.

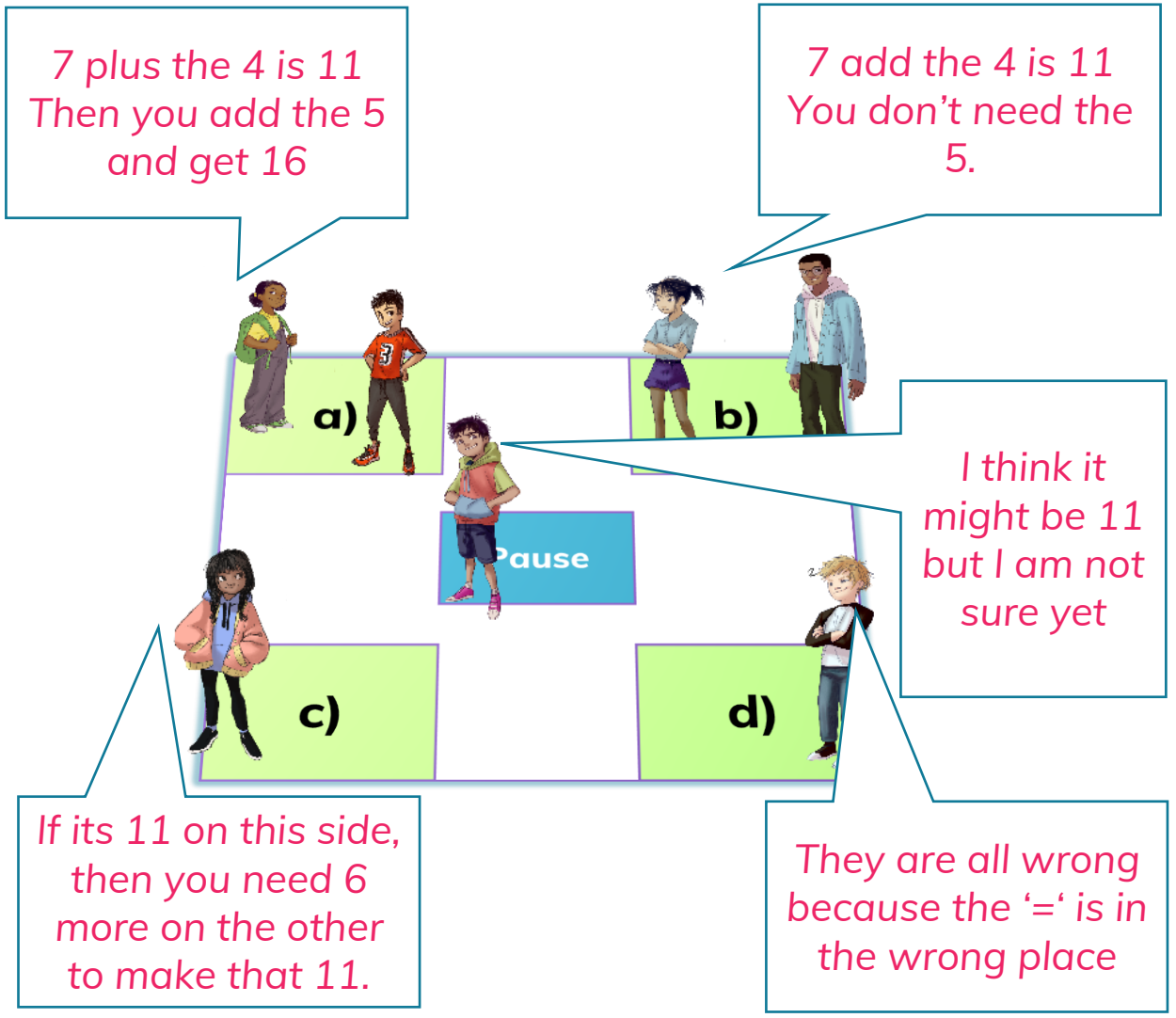
Kaiako use the week to try and convince ‘us’ to unanimously understand and explain the solution.

moveNprove are helping teachers with mini spirals of inquiry

Which number completes the equation?

$7 + 4 = [\ \ ] + 5$

a. 16
b. 11
c. 6
d. none



moveNprove are helping teachers with mini spirals of inquiry

Maths: Ideas and Insights TLF

Private group · 694 members

$$7 + 4 = [\ ] + 5$$

16	11	6	None & corner

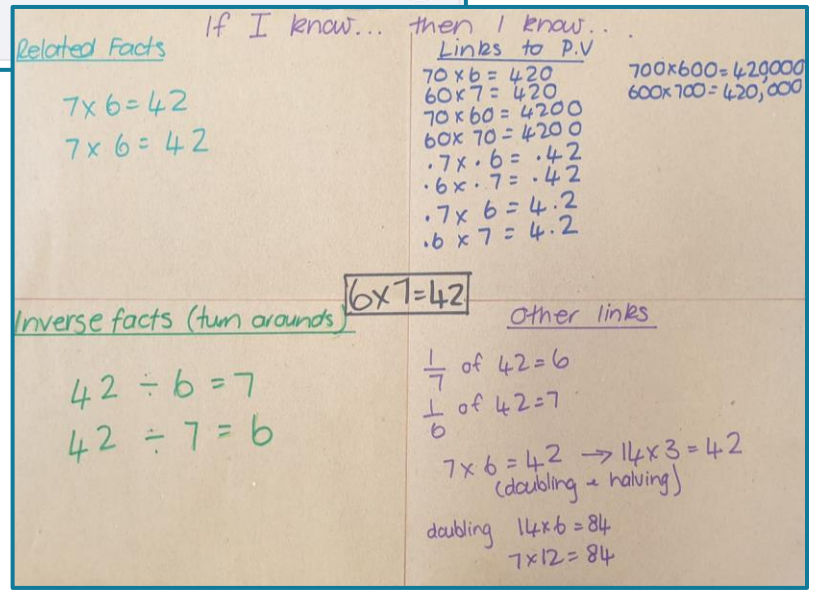
Year 5 and 6
15 schools

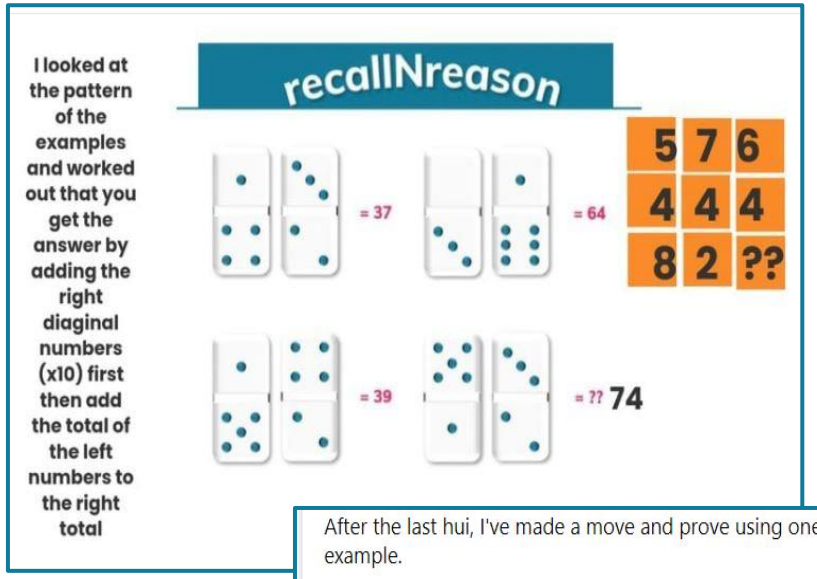
Year 7 and 8
12 schools

Kaiako are creating and sharing rapid routines for everyone

A 45 sec video from One Tree Point on a snapshot of their MovenProve for 7 + 4 = [ ] = 5. Thanks OTP😀

YOUTUBE.COM
Move n Prove 3





After the last hui, I've made a move and prove using one of the ARBs. It's a L3 example.