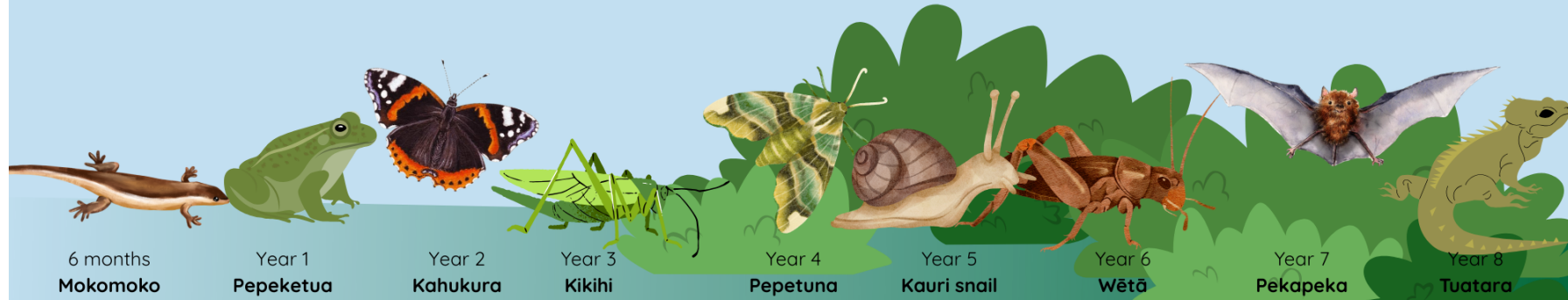




Mathematics and Statistics Pathway



Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Number and Algebra

Credits: Dr Jo Knox & Marie Hirst wrote the pathway for Number and Algebra. The content is drawn from the Te Mātaiaho , New Zealand Curriculum - Mathematics and Statistics , Number strand. Teachers also cover other content and other stands which are

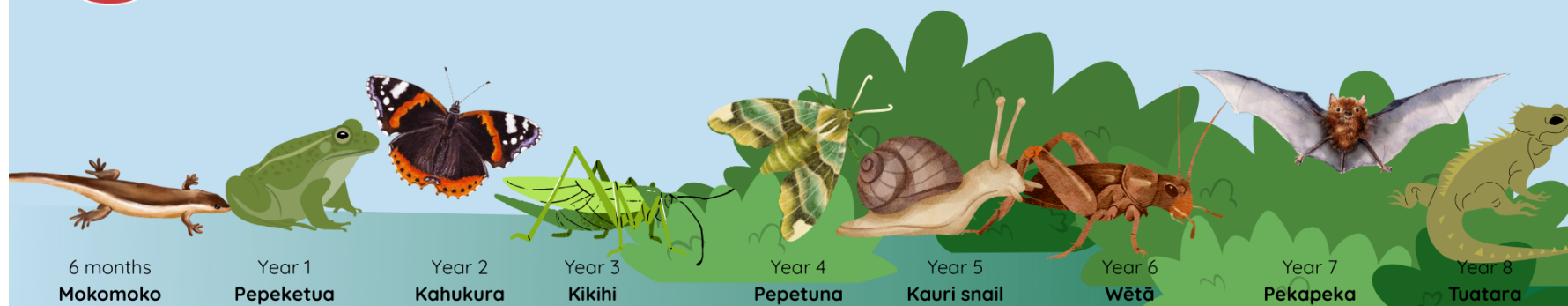
Blockhouse Bay Primary School Teachers designed the pathway during 2025 ready for implementation in Term 4 2025. The Number and Statistics Pathway is designed for children and teachers to access the key knowledge needed at each stage of learning in an engaging and child friendly way.

During Term 4 the teachers will assess the children against the pathway and whānau will be able to see which goals children have achieved and what the children's next steps are. This will be available on Hero in Week 10 of Term 4.

Update: At the start of Term 4 the Ministry of Education unexpectedly released another updated curriculum for Mathematics and Statistics. Blockhouse Bay Primary School Teachers will now work to update this pathway, teaching programmes and the support materials needed to implement the latest curriculum. This will take place in 2026.



Mathematics and Statistics Pathway



The Mathematical Inquiry Team at Blockhouse Bay Primary has created new pathways for teaching and learning mathematics, all designed to align with **Te Mātaiaho | The New Zealand Curriculum - Mathematics and Statistics**. Our new approach is built on the framework developed by Dr. Jo Knox and Marie Hirst, Education Consultants. After much discussion, research, and reading, we have adopted this model to guide our work.

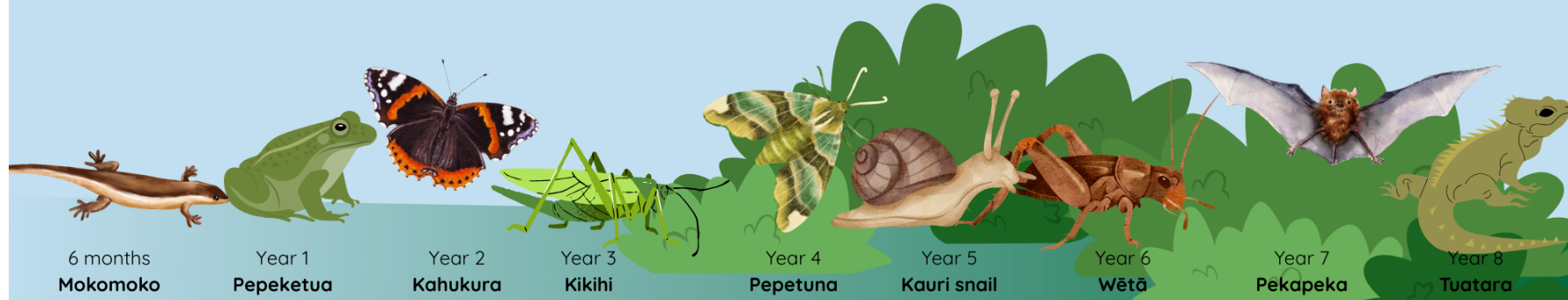
To develop the **"Blockhouse Bay Primary School 'Dos' of Mathematics and Statistics"**—the key actions and skills students will use—we have combined elements from our previous pathways, the [Mathematics Investigation Cycle \(MPTC\)](#), and the **'Dos' progressions from Te Mātaiaho**. The Dos will be the foundation of our teaching sessions and will be shared with students explicitly so they understand what it means to be a mathematician. One way student progress will be measured is using a three-phase snapshot assessment from Dr Jo Knox and Marie Hirst. [Phase One](#), [Phase Two](#) and [Phase Three](#).

Our Maths Learning Pathways

Blockhouse Bay Primary School has its own visual pathway to help students and parents track learning. The pathway is visually represented by New Zealand's forest and fauna which is home to diverse insects and animals.. Our Mathematics and Statistics Learning Pathways are named after some of these species. The characteristics of each animal or insect represents the way learning takes place at each level of the Mathematics and Statistics curriculum.



Mathematics and Statistics Pathway



Phase one Years 1-3

Mokomoko, (Skink) **Pepeketua**, (native frog) and **Kahukura** (Admiral Butterfly) represent the foundational learning of Mathematics in Years 1 and Year 2. During the first 6 months **Mokomoko** (meaning to dart about) represents the children quickly learning to count and write numbers. **Pepeketua** represents our learners eagerly jumping at the chance to learn new things. "Kahukura" means "red cloak," symbolising the butterflies (and learners) wrapping themselves in new knowledge. As the students meet learning in Year 3 the students become **Kikihi**. This sounds like the cicada's song, representing how their mathematical ideas and stories become more complex and connected.

Phase Two Years 4-6

The **Pepituna** - pūriri moth's entire larval period may take as much as four years, thus showing the mathematical knowledge learners have undertaken during school at this time. **Kauri snails** show wisdom amongst the insects living up to 20 years and **Wētā** has the ability to survive in diverse habitats, adapt to threats, and be rediscovered after being thought extinct showcases resilience, a key element of wisdom.s.

Phase Three Years 7-8

The increasing complexity of learning in Mathematics is represented by the **Pekapeka** (long-tailed bats) and the **Tuatara** has been around since the dinosaurs representing the significant learning undertaken so far.

Phase 1: 6 Months *Mokomoko*



Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase One pages 32 - 39

I am learning to....

Number Structure

1, 2, 3 ...

Count forwards to 10

10, 9, 8...

Count backwards from 10.



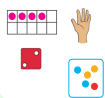
Identify numbers up to 10.

3, 4, 5, _

Say the number after (1 more) up to 10.

_ , 7, 8, 9

Say the number before (1 less) up to 10.



Subitise (recognise without counting) up to 5 objects.



Solve addition and subtraction problems up to 10 by grouping and counting.



Number Operations



6 months
Mokomoko



Phase 1: Year 1 *Pepeketua*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase One pages 32 - 39



I am learning to...

Number Structure

10, 11, 12...

Count forwards to 20.

20, 19, 18...

Count backwards from 20.



Identify numbers up to 20.

12, 13, 14, _

Say the number after (1 more) up to 20.

_ , 13, 14, 15

Say the number before (1 less) up to 20.



Subitise (recognise without counting) up to 10 objects.



Represent teen numbers to 20 using base ten structure.



Represent 'ty' numbers using base ten structure.



$$\begin{array}{l} 5 + 3 = _ \\ 7 - 2 = _ \\ 3 + 4 = _ \end{array}$$

Recall addition and subtraction basic facts to 10.

$$\begin{array}{l} 9 + 7 = _ \\ 7 + ? = 11 \end{array}$$

Solve addition and subtraction problems up to 20 by grouping and counting.

$$\begin{array}{l} 13 - 4 = _ \\ 14 + 6 = _ \end{array}$$

Solve addition and subtraction problems up to 20 by grouping and counting and find the difference.



Solve simple 1 x 1-digit multiplication and division problems using equal grouping and counting.



Identify, read, write and represent $\frac{1}{2}$ and $\frac{1}{4}$ fractions.



Find $\frac{1}{2}$ or $\frac{1}{4}$ of a set using equal sharing.



Year 1
Pepeketua





Phase 1: Year 2 *Kahukura*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase One page 32 - 39

I am learning to....

Number Structure

72, 73, 74... Count forwards to 100.

68, 69, 70... Count backwards from 100.


 Identify numbers up to 100.


 Say the number after (1 more) up to 100.


 Say the number before (1 less) up to 100.


 Subitise (recognise without counting) more than 10 objects by combining groups


 Represent numbers to at least 100 using base ten structure.



Number Operations

$6 + 1 =$
 $8 - 1 =$
 Recall addition and subtraction basic facts to 10 (+/- 1 and 0).

$2 + 3 =$
 $4 + 1 =$
 Recall addition and subtraction basic facts to 10 (bonds to 5).

$5 + 3 =$
 $5 + 2 =$
 Recall addition and subtraction basic facts to 10 (with 5).

$$\begin{array}{l} 3 + 3 = \\ 4 + 4 = \\ 5 + 5 = \end{array}$$

Recall addition and subtraction basic facts to 10 (doubles/halves).

$$\begin{array}{l} 1 + 9 = \\ 2 + 8 = \\ 3 + 7 = \end{array}$$

Recall addition and subtraction basic facts to 10 (bonds to 10).

$$\begin{array}{l} 6 - 4 = \\ 8 + 1 = \\ 2 - 7 = \end{array}$$

Recall addition and subtraction basic facts to 10 (all +/- facts to 10).

$$42 + 33 =$$

Solve addition and subtraction problems up to 100 without renaming.

$$\begin{array}{l} 6 \times 2 = \\ 10 \div 2 = \end{array}$$

Recall multiplication and division basic facts - know skip counting sequences for x2.

$$\begin{array}{l} 4 \times 5 = \\ 30 \div 5 = \end{array}$$

Recall multiplication and division basic facts - know skip counting sequences for x5.

$$\begin{array}{l} 8 \times 10 = \\ 40 \div 10 = \end{array}$$

Recall multiplication and division basic facts - know skip counting sequences for x10.



Solve 1 x 1-digit multiplication and division problems using equal grouping or skip counting (in 2s, 5s, or 10s).



Identify, read, write and represent $\frac{1}{2}$, $\frac{1}{4}$, $\frac{1}{8}$ fractions.



Find $\frac{1}{2}$ or $\frac{1}{4}$ of a set using groups and patterns.



Year 2
Kahukura



Phase 1: Year 3 *Kikihi*

Te Mātalaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase One pages 32 - 39



Number Structure

I am learning to....

344, 345,
346...

Count forwards to 1000.

786, 785,
784...

Count backwards from 1000.

100 234
702 637
967

Identify numbers up to 1000.

456 _

Say the number after (1 more) up to 1000.

_ 987

Say the number before (1 less) up to 1000.



Subitise (recognise without counting) - estimate the number of objects up to 100.



Represent numbers to at least 1000 using base ten structure.



Number Operations

$10 + 3 =$
 $7 + 10 =$

Recall addition and subtraction basic facts to 20 (teen facts).

$6 + 6 =$
 $14 - 7 =$
 $8 + 8 =$

Recall addition and subtraction basic facts to 20 (doubles/halves).

$5 + 6 =$
 $7 + 8 =$

Recall addition and subtraction basic facts to 20 (near doubles).

$8 + 6 =$
 $12 - 5 =$

Recall addition and subtraction basic facts to 20 (all +/- facts to 20).

$$37 + 18 =$$

$$43 - 28 =$$

Solve 2-digit addition and subtraction problems up to at least 100.

$$6 \times 2 =$$

$$10 \div 2 =$$

Recall multiplication and division basic facts - $\times \div$ 2.

$$8 \times 10 =$$

$$40 \div 10 =$$

Recall multiplication and division basic facts - $\times \div$ 10.

$$4 \times 5 =$$

$$30 \div 5 =$$

Recall multiplication and division basic facts - $\times \div$ 5.

$$6 \times 3 =$$

$$24 \div 3 =$$

Recall multiplication and division basic facts - $\times \div$ 3.

$$4 \times 6 =$$

Solve 1 x 1-digit multiplication and division problems using skip counting or known facts.

$$2 \times 23 =$$

Solve simple 1 x 2-digit multiplication and division problems using skip counting or known facts.



Solve multiplication and division problems by dividing numbers (with no remainders) using grouping.

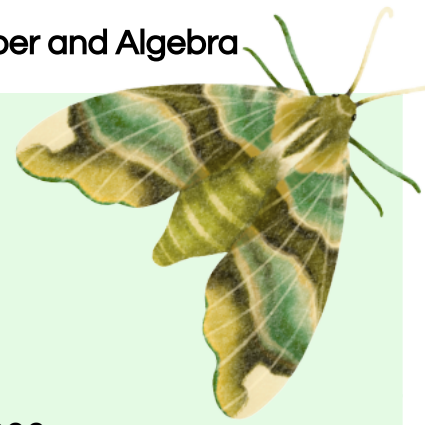


Identify, read, write and represent $\frac{1}{2}$, $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, $\frac{1}{6}$, $\frac{1}{8}$ fractions.



Find a unit fraction of a whole number using grouping.





Phase 2: Year 4 *Pepetuna*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase Two pages 60 - 68

Number Structure

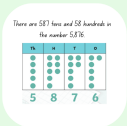
I am learning to....



Identify, read, write, compare & order numbers to 10,000 (including saying numbers 1, 10, 100 more/less).



Represent numbers using base ten structure - expand numbers up to 10,000.



Represent numbers using base ten structure - know how many 10s and 100s are in all of a number up to 10,000.



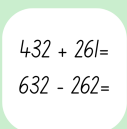
Number Operations



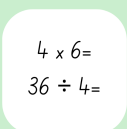
Estimate and check using rounding, estimation and inverse operations to predict results and check calculations at a Year 4 level.



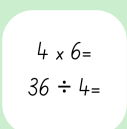
Round whole numbers to the nearest thousand, hundred or ten.



Add and subtract 2- and 3- digit numbers.



Recall $x \div$ basic facts $x 4$.



Recall $x \div$ basic facts $x 6$.



Multiply 1-digit $\times$ 1-digit.



Multiply 2-digit $\times$ 1-digit.

$$60 \div 5 =$$

Divide up to a 3-digit by a 1-digit divisor with no remainder.

 $\frac{1}{10}$ is equal to 0.1


Identify, read, write, represent, compare, order & convert tenths as fractions and decimals.

A rope is 57 meters long. You want to cut it into 10 equal pieces. How long will each piece be? 5.7m/0.7



Divide whole numbers by 10 to make decimals.

$$1.5 + 0.3 =$$

Add and subtract decimals to 1 decimal place.

 $\frac{5}{10}$ is equivalent to $\frac{1}{2}$


Compare & order fractions (and identify equivalence) with denominators of 2, 4 and 8, 3 and 6, or 5 and 10.

$$\frac{17}{5} = 3 \frac{2}{5}$$

Convert between mixed numbers and improper fractions with denominators 2, 3, 4, 5, 6, 10.

$$\frac{1}{5} \text{ of } 30$$

Find a unit fraction of a whole number using multiplication or division facts.

$$\frac{1}{4} + \frac{1}{4} + \frac{2}{4} = 1$$

Add and subtract fractions with the same denominators to make up to 1 whole.



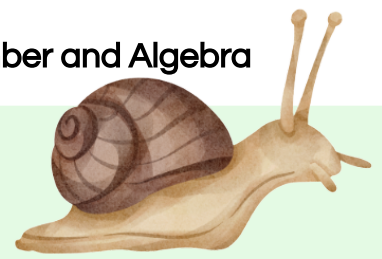
We need to double the recipe, so instead of one cup, we need two cups.

Solve ratio problems or scale a quantity using doubling or halving.



Year 4
Pepetuna





Phase 2: Year 5 *Kauri Snail*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase Two pages 60 - 68

I am learning to....

Number Structure



Identify, read, write, compare & order numbers to 100,000 (including saying numbers 1, 10, 100 more/less).



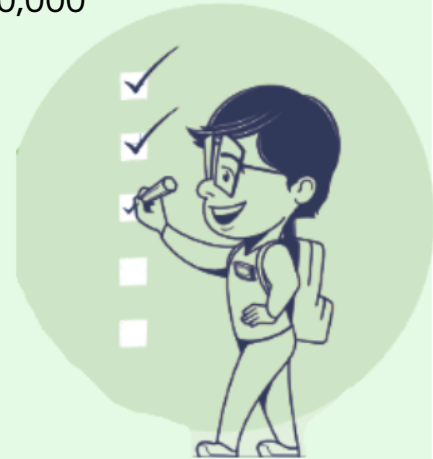
Represent numbers using base ten structure - expand numbers up to 100,000.



Identify factors of numbers up to 100.



Represent numbers using base ten structure - know how many 10s and 100s are in all of a number up to 100,000.



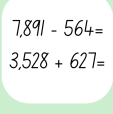
Number Operations



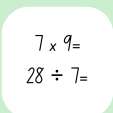
Estimate and check using rounding, estimation and inverse operations to predict results and check calculations at a Year 5 level.



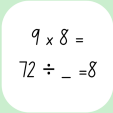
Round whole numbers to the nearest ten thousand, thousand, hundred or ten.



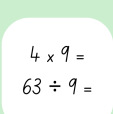
Add and subtract whole numbers up to 10,000.



Recall $\times \div$ basic facts $\times 7$.



Recall $\times \div$ basic facts $\times 8$.



Recall $\times \div$ basic facts $\times 9$.



Multiply 3-digit $\times$ 1-digit.

$$26 \times 39 =$$

Multiply 2-digit x 2-digit.

$$456 \div 9 = 50 \text{ r}6$$

Divide up to 3-digit by a 1-digit divisor with a remainder.

$$58/100 = 0.58$$

Identify, read, write, represent, compare, order & convert tenths and hundredths as fractions and decimals.

$$47 \div 10 = 4.7$$

Divide whole numbers by 10 and 100 to make decimals.

$$7.3 \text{ rounds to } 7$$

Round tenths to the nearest whole.

$$18.47 + 6.32 =$$

Add and subtract decimals to 2 decimal places.

$$\frac{5}{6} > \frac{7}{12}$$

$$\frac{2}{3} = \frac{8}{12}$$

Compare & order fractions (and identify equivalence with denominators of 2, 3, 4, 5, 6, 8, 10, 12 or 100).

$$\frac{17}{6} = 2 \frac{5}{6}$$

Convert between mixed numbers and improper fractions with denominators up to 10.

$$\frac{3}{4} \text{ of } 36$$

Find a fraction of a whole number.

$$\frac{2}{5} + \frac{1}{5} + \frac{4}{5} + \frac{3}{5} = 2$$

Add and subtract fractions with the same denominators to make more than 1 whole.

If this recipe feeds 4 people,
how much of each ingredient do we
need to feed 20 people?



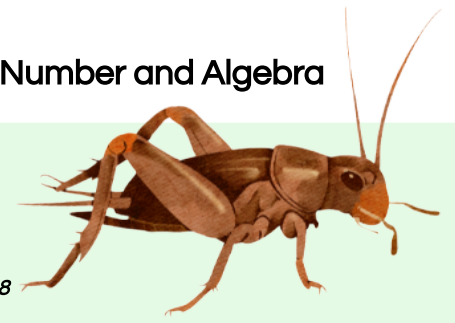
Solve ratio problems or scale a quantity using known multiplication facts.



Year 5
Kauri snail

Moves to
Wētā
Year 6





Phase 2: Year 6 *Wētā*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase Two pages 60 - 68

I am learning to....

Number Structure



Identify, read, write, compare & order numbers to 1,000,000 (including saying numbers 1, 10, 100 more/less)



Represent numbers using base ten structure - expand numbers up to 1,000,000.

32 = 1, 2, 4, 8, 16, 32
72 = 1, 2, 3, 4, 6, 8, 9, 12, 18, 24, 36, 72

Identify square numbers and factors of numbers up to 125.

There are 9932 tens and 910 hundreds in the number 993291.

Thousands	Hundreds	Tens	Units
9	9	3	2

Represent numbers using base ten structure - know how many 10s and 100s are in all of a number up to 1,000,000.



Number Operations



Estimate and check using rounding, estimation and inverse operations to predict results and check calculations at a Year 6 level.



Round whole numbers to a specified multiple of ten.

$$45,123 + 8,765 =$$

Add and subtract any whole numbers.

$$8 \times _ = 64$$

$$54 \div 9 =$$

Recall $\times \div$ all basic facts to at least 10×10 .

$$\begin{array}{r} 489 \\ \times 29 \\ \hline \end{array}$$

Multiply multi-digit whole numbers.

$$6539 \div 7 = 934 \text{ r}1$$

Divide up to 4-digit by a 1-digit divisor with a remainder.

$$23/100 = 0.23 = 23\%$$



Identify, read, write, represent, compare, order & convert fractions, decimals (to 2dp) and percentages.

$$8.4 \times 10 = 84$$

Multiply and divide by 10 and 100 to make decimals and whole numbers.

$$6.83 \text{ rounds to } 6.8$$

Round tenths and hundredths to the nearest whole or 1 dp.

$$3/4.56 + 278.43 =$$

Add and subtract decimals to 2 decimal places.

$$\frac{18}{24} = \frac{9}{12} = \frac{3}{4}$$

Compare & order fractions (and identify equivalence with denominators of 2, 3, 4, 5, 6, 8, 10, 12 or 100 and represent them in their simplest form.

$$\frac{25}{8} = 3 \frac{1}{8}$$

Convert between mixed numbers and improper fractions with any denominators.

$$\frac{2}{5} \text{ of } 75$$

$$25\% \text{ of } 200$$

Find a fraction or percentage of a whole number.

$$\frac{3}{8} + \frac{1}{4} =$$

Add and subtract fractions with the same or related denominators.

If a recipe serves 6 people how much of each ingredient do we need to feed 27?



Solve ratio problems or scale a quantity using known multiplication and division facts.



Year 6
Wētā





Phase 3: Year 7 *Pekapeka*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase Three pages 88-92

I am learning to....

Number Structure

$$10^1 = 10$$

$$10^2 = 100$$

$$10^3 = 1,000$$

Identify, read, write, compare & order whole numbers using powers of 10.

The HCF of 24
and 36 is 12.

Factors of 24: 1, 2, 3, 4, 6, 8, 12, 24
Factors of 36: 1, 2, 3, 4, 6, 9, 12, 18, 36

Find the highest common factor (HCF) of two numbers under 100.

The LCM of 6
and 8 is 24.

Multiples of 6: 6, 12, 18, 24, 30, 36
Multiples of 8: 8, 16, 24, 32, 40

Find the least common multiple (LCM) of two numbers under 10.



Number Operations



Check calculations using rounding and estimation to predict and check reasonableness of calculations at a Year 7 level.

74,387

74,387 is 74,400 to the nearest hundred

Round whole numbers to any specified power of 10 at a Year 7 level.

72.6468

72.6468 rounds to 72.65 to the nearest hundredth

Round decimals to the nearest tenth, hundredth or whole number.

Circle the numbers divisible by 10
150 523 990
1015 3100

Recall facts to 10 x 10 and describe the divisibility rules for 2, 3, 5, 9 and 10.

$$378 \times 15 =$$

Multiply whole numbers at a Year 7 level.

$$327 \div 5 = 65.4$$

$$\text{or } 65 \frac{2}{5}$$

Divide whole numbers by 1- or 2-digit divisors.

Place brackets in the following equations to make the statements true
 $5 \times 4 + 3 = 35$
 $40 \div 2 + 3 = 8$

Use the order of operations at a Year 7 level.

Order the following integers from least to greatest
10, -5, 1, 15, -2
-14, 8, -6, 12, -1

Order, compare and locate integers on a number line.



Identify, read, write and represent fractions, decimals (to 3dp) and percentages.

$$0.518 = \frac{518}{1000} = 51.8\%$$

Compare, order and convert between fractions, decimals (to 3dp) and percentages.

$$28 \div 1000 =$$

$$0.43 \times 10 =$$

Multiply and divide by 10, 100 and 1,000 to make decimals.

$$\frac{16}{60} = \frac{8}{30} = \frac{4}{15}$$

Use equivalence to find equivalent fractions and simplify fractions at a Year 7 level.

$$\frac{17}{5} = 3\frac{2}{5}$$

Use equivalence to convert between improper fractions and mixed numbers at a Year 7 level.

$$\frac{3}{4} \times 160 =$$

Multiply fractions by whole numbers at a Year 7 level.

$$0.25 \times 88 =$$

Multiply decimals by whole numbers at a Year 7 level.

$$25\% \text{ of } \$ = \$100$$

Find percentages of a whole number and find a whole amount given a simple fraction or percentage at a Year 7 level.

$$\frac{3}{4} + \frac{2}{3} =$$

Add and subtract fractions with different denominators of up to a tenth using equivalent fractions.

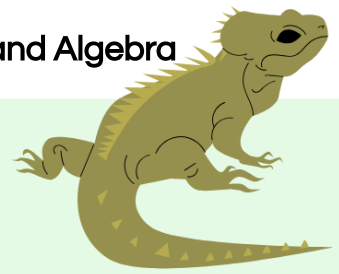
$$1.371 + 0.89 =$$

Add and subtract decimals to 3 decimal places (and estimate first).



Use proportional reasoning to solve ratio problems by exploring multiplicative relationships between quantities.





Phase 3: Year 8 *Tuatara*

Te Mātaiaho The New Zealand Curriculum - Mathematics and Statistics Curriculum Phase Three pages 88-92

I am learning to....

Number Structure

$$0.01 = \frac{1}{100} = 10^{-2}$$

Identify, read, write, compare & order whole numbers and decimals using powers of 10.

3 Can only be divided by 1 and 3
5 Can only be divided by 1 and 5
7 Can only be divided by 1 and 7
11 Can only be divided by 1 and 11

Identify and describe prime numbers.

$$20 = 2 \times 2 \times 5 \\ = 2^2 \times 5$$

Use prime factorisation to represent a number.

24 and 36 are common prime factors for
24 and 36, so the HCF = 12
 $24 = 2 \times 2 \times 2 \times 3 = 2^3 \times 3$
 $36 = 2 \times 2 \times 3 \times 3 = 2^2 \times 3^2$

Use prime factorisation to find the highest common factor (HCF) of two numbers.



Number Operations

Worked Example: Round 123.456 to the nearest 10, 100, and 1000. What is the HCF of 123 and 456?

Check calculations using rounding and estimation to predict and check reasonableness of calculations at a Year 8 level.

$$86,378 \\ \approx 86,400 \\ \text{to the nearest hundred}$$

Round whole numbers to any specified power of 10 at a Year 8 level.

$$54.678 \\ \approx 54.7 \\ \text{to the nearest tenth}$$

Recall decimals to the nearest tenth, hundredth, thousandth or whole number.

Circle the numbers divisible by 6
62 76 98
114 82 296

Identify and describe the divisibility rules for 2 - 11.

$$624 \times 378 =$$

Multiply whole numbers at a Year 8 level.

$$327 \div 15 = 21.8 \\ \text{or } 21 \frac{4}{5}$$

Divide any whole numbers.

$$3(4 + 5) - 2 = \\ 18 - 2^2 \times 4 =$$

Use the order of operations at a Year 8 level.

$$-6 - 9 = \\ -12 + 7 =$$

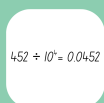
Order, compare, add and subtract integers.



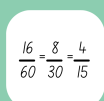
Identify, read, write and represent fractions, decimals and percentages.



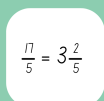
Compare, order and convert between fractions, decimals and percentages.



Multiply and divide by powers of 10 to make decimals.



Use equivalence to find equivalent fractions and simplify fractions at a Year 8 level.



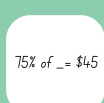
Use equivalence to convert between improper fractions and mixed numbers at a Year 8 level.



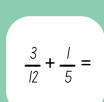
Multiply fractions by whole numbers at a Year 8 level.



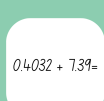
Multiply decimals by whole numbers at a Year 8 level.



Find percentages of a whole number and find a whole amount given a simple fraction or percentage at a Year 8 level.



Add and subtract fractions with different denominators using equivalent fractions.



Add and subtract any decimals (and estimate first).



Use proportional reasoning to solve ratio problems and share with unequal proportions.

