Numeracy Information Session
Monday 1st of June
A bit of fun...

**Maths**

The total is when you add up all the numbers and a remainder is an animal that pulls Santa on his sleigh.

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To change centimeters to meters you _take out centi_.
I ❤️ Maths

Growth Mindsets

Positive Maths Attitudes

Every child, every opportunity
‘When children reach the age of 5 many parents get a dreadful shock. They find their children bringing home vocabulary and methods that they just don’t recognise.’

‘Parents keen to help realise that…they don’t understand what their child is doing and…when they try to demonstrate how to do something differently, all they manage to do is confuse the child.’

Taken from: ‘Maths for Mums and Dads’
Maths Vocabulary

• In Foundation how many ‘maths’ words do you think children will need to learn?

  40!

• There are 3 tiers of vocabulary: English language Proficiency Vocabulary (Tier 1 and 2) and Academic Vocabulary (Tier 3 - Guaranteed, Supportive and Cognitive).

• Maths vocabulary tends to rely on Guaranteed (e.g. decimal, fraction, median) and Cognitive Language (analyse, classify, predict - verbs)

• Guaranteed in Foundation – 24       Cognitive in Foundation - 16
<table>
<thead>
<tr>
<th>numeral</th>
<th>number facts</th>
<th>subtilise</th>
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<tbody>
<tr>
<td>trust the count</td>
<td>ordinal patterns</td>
<td>more</td>
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<tr>
<td>less</td>
<td>same</td>
<td>collections</td>
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<tr>
<td>total</td>
<td>sharing</td>
<td>single</td>
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<tr>
<td>digit</td>
<td>numbers</td>
<td>addition (and)</td>
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<td>concrete materials</td>
<td>visual representations</td>
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<td>subtraction</td>
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<td>backwards</td>
<td>from</td>
<td>objects</td>
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<tr>
<th>model</th>
<th>recognise</th>
<th>count</th>
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<tr>
<td>write</td>
<td>continue</td>
<td>say</td>
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<tr>
<td>order</td>
<td>classify</td>
<td>sort</td>
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<td>explain</td>
<td>identify</td>
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<td>copy</td>
<td>combine</td>
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<tr>
<td>represent</td>
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</table>
Mathematics vs. Numeracy

Numeracy describes an individual’s performance when using mathematics to solve problems and interpret and produce text, arguments and conclusions. It is context specific.

Hume Region Numeracy Strategy (2008–09)

Numeracy is not the same as mathematics, nor is it an alternative to mathematics. Rather, it is an equal and supporting partner in helping students learn to cope with the quantitative demands of modern society. Whereas mathematics is a well-established discipline, numeracy is necessarily inter-disciplinary. Like writing, numeracy must permeate the curriculum. When it does, also like writing, it will enhance students’ understanding of all subjects and their capacity to lead informed lives.

Steen (2001)

1/3 of Australian 4 and 5 year olds do not know basic numbers and cannot count to 20 ACER Research 2013
The Lesson Structure

**Warm up Activity (whole class) 5 mins**
A tuning in activity focusing on counting skill or an aspect of mental computation
Fun activities such as target games and skip counting
Whole class discussion to develop efficient mental strategies

**The Hook & Main Teaching Focus (whole class) 10 mins**
An investigation of a key mathematics topic
An opportunity for children to construct mathematical ideas and develop thinking skills
A focus on open questions that encourage children to discuss the strategies they used to solve a problem
Building mathematical vocabulary
Developing a positive attitude towards maths

**Student Task (Small groups or individual) 25 mins**
Reinforcing the ideas introduced earlier in the main teaching activity
Using different grouping approaches depending on the lesson content and the range of ability levels
Homogeneous small groups for explicit teaching and independent activities
Catering for individual needs e.g. additional assistance or extension

**Reflection 5 mins**
Articulating and sharing the strategies children used in the main teaching activity
Consolidating the learning that has been taking place
Reflecting on what has been learned
Addressing any misconceptions
Praising the progress that has been made
Setting activities to do at home
We believe:

Mathematics teaching at Ocean Grove Primary School incorporates the four proficiencies and provides all students with the opportunity to participate in and solve challenging tasks using a variety of tools, with a strong emphasis on dialogue.
The Four Proficiencies

**Fluency:** Fluency includes, but is not just about, recall of ‘facts’, which would include fluency in number bonds (addition and subtraction within numbers to 20 and multiplication up to 10 x 10 and associated division facts). Being fluent includes some memorising of ‘facts’, but it is not just about memory, drill and practice: understanding and reasoning play a big part in becoming fluent.

**Understanding:** Actions here include - Asking ‘Why’ as well as ‘How’, working with and moving between different representations and connecting ideas.

**Reasoning:** Explaining thinking, deducing and justifying strategies. Adapt the known to the unknown and transfer it.

**Problem solving:** Involves making choices, modeling situations mathematically and communicating the solutions.

**AusVELS** has a strong focus on being proficient mathematicians by problem solving, being fluent and able to determine which strategy is most applicable and efficient. Reasoning and understanding-leads to numerate students.
How is the Foundation to Year 10 Australian Mathematics Curriculum structured?

The Foundation to Year 10 Australian Curriculum: Mathematics is organised around three content strands and four proficiency strands.

The content strands are:

• *Number and Algebra*
• *Measurement and Geometry*
• *Statistics and Probability*

The proficiency strands describe the actions in which students can engage when learning and using the content. The proficiencies are incorporated into the content descriptions of the three strands. While not all proficiency strands apply to every content description, they indicate the breadth of mathematical actions that teachers can emphasise.

The proficiencies are:

• *Fluency*
• *Understanding*
• *Reasoning*
• *Problem solving*
Standards and progression point examples

Mathematics – Progressing towards Foundation

<table>
<thead>
<tr>
<th>Progression Point 0.5</th>
<th>Mathematics – Foundation Level Achievement Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>At 0.5, a student progressing towards the standard at Foundation may, for example:</td>
<td>Number and Algebra: Students connect number names and numerals with sets of up to 20 elements, estimate the size of these sets, and use counting strategies to solve problems that involve comparing, combining and separating these sets. They match individual objects with counting sequences up to and back from 20. Students order the first 10 elements of a set.</td>
</tr>
<tr>
<td><strong>Number and Algebra</strong></td>
<td><strong>Number and Algebra</strong></td>
</tr>
<tr>
<td>• connect number names and numerals with sets of up to 10 elements,</td>
<td>• Students connect number names and numerals with sets of up to 20 elements, estimate the size of these sets, and use counting strategies to solve problems that involve comparing, combining and separating these sets. They match individual objects with counting sequences up to and back from 20. Students order the first 10 elements of a set.</td>
</tr>
<tr>
<td>• use counting strategies to solve problems that involve comparing, combining and separating these sets.</td>
<td></td>
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<tr>
<td>• match individual objects with counting sequences up to and back from 10.</td>
<td></td>
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<tr>
<td>• order the first, second and third elements of a set.</td>
<td></td>
</tr>
<tr>
<td><strong>Measurement and Geometry</strong></td>
<td><strong>Measurement and Geometry</strong></td>
</tr>
<tr>
<td>• identify measurement attributes of length and mass in practical situations</td>
<td>• Students identify measurement attributes in practical situations and compare lengths, masses and capacities of familiar objects. They order events, explain their duration, and match days of the week to familiar events. Students identify simple shapes in their environment and sort shapes by their common and distinctive features. They use simple statements and gestures to describe location.</td>
</tr>
<tr>
<td>• compare lengths and masses of familiar objects.</td>
<td></td>
</tr>
<tr>
<td>• order events in a day and name the days of the week, in order.</td>
<td></td>
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<tr>
<td>• identify simple shapes in their environment and use simple location words.</td>
<td></td>
</tr>
<tr>
<td><strong>Statistics and Probability</strong></td>
<td><strong>Statistics and Probability</strong></td>
</tr>
<tr>
<td>• answer simple yes/no questions about given categorical data that are sorted.</td>
<td>• Students sort familiar categorical data into sets and use these to answer yes/no questions and make simple true/false statements about the data.</td>
</tr>
</tbody>
</table>
## Mathematics – Progressing towards Level 6

### Mathematics – Level 5 Achievement Standard

#### Number and Algebra
Students solve simple problems involving the four operations using a range of strategies including digital technology. They estimate to check the reasonableness of answers and approximate answers by rounding. Students identify and describe factors and multiples. They explain plans for simple budgets. Students order decimals and unit fractions and locate them on a number line. Students add and subtract fractions with the same denominator. They find unknown quantities in number sentences and continue patterns by adding or subtracting fractions and decimals.

#### Measurement and Geometry
Students use appropriate units of measurement for length, area, volume, capacity and mass, and calculate perimeter and area of rectangles. They convert between 12 and 24-hour time. Students use a grid reference system to locate landmarks. They estimate angles, and use protractors and digital technology to construct and measure angles. Students connect three-dimensional objects with their two-dimensional representations. They describe transformations of two-dimensional shapes and identify line and rotational symmetry.

#### Statistics and Probability
Students pose questions to gather data and construct various displays appropriate for the data, with and without the use of digital technology. They compare and interpret different data sets. Students list outcomes of chance experiments with equally likely outcomes and assign probabilities as a number from 0 to 1.

### Progression Point 5.5
At 5.5, a student progressing towards the standard at Level 6 may, for example:

#### Number and Algebra
- represent composite numbers as a product of their prime factors
- identify the highest common factor (greatest common divisor) and lowest common multiple of two whole numbers
- explore the use of brackets and order of operations to write and evaluate number sentences
- continue and create sequences involving whole numbers, fractions and decimals, according to a given rule
- use ordered pairs of whole numbers to represent coordinates of points and locate these points on simple grids and in the first quadrant on the Cartesian plane.

#### Measurement and Geometry
- recognise metric prefixes and convert between common metric units
- access print and digital timetables, answer simple questions using a timetable and create simple personal timetables
- describe acute, obtuse and reflex angles in terms of their relationship to multiples of a right angle
- investigate compass points, angles on a straight line, angles at a point, and vertically opposite angles.

#### Statistics and Probability
- evaluate the effectiveness of different displays in illustrating data features, including variability
- pose questions and collect categorical or numerical data by observation or survey, and distinguish between a sample and a population
- recognise that probability can be interpreted as an

### Mathematics – Level 6 Achievement Standard

#### Number and Algebra
Students recognise the properties of prime, composite, square and triangular numbers and determine sets of these numbers. They solve problems that involve all four operations with whole numbers and describe the use of integers in everyday contexts. Students locate fractions and integers on a number line and connect fractions, decimals and percentages as different representations of the same number. They solve problems involving the addition and subtraction of related fractions. Students calculate a simple fraction of a quantity and calculate common percentage discounts on sale items, with and without the use of digital technology. They make connections between the powers of 10 and the multiplication and division of decimals. Students add, subtract and multiply decimals and divide decimals where the result is rational. Students write number sentences using brackets and order of operations, and specify rules used to generate sequences involving whole numbers, fractions and decimals. They use ordered pairs of integers to represent coordinates of points and locate a point in any one of the four quadrants on the Cartesian plane.

#### Measurement and Geometry
Students relate decimals to the metric system and choose appropriate units of measurement to perform a calculation. They solve problems involving length and area, and make connections between capacity and volume. Students interpret a variety of everyday timetables. They solve problems using the properties of angles and investigate simple combinations of transformations in the plane, with and without the use of digital technology. Students construct simple prisms and pyramids.

#### Statistics and Probability
Students interpret and compare a variety of data displays, including displays for two categorical variables. They analyse and evaluate data from secondary sources. Students compare observed and expected frequencies of events, including those where outcomes of trials are generated with the use of digital technology. They specify, list and communicate probabilities
Big Ideas in Number

LEVEL 1 – Trusting the Count, developing flexible mental objects for the numbers 0 to 10.

LEVEL 2 – Place-value, the importance of moving beyond counting by ones, the structure of the base 10 numeration system.

LEVEL 3 – Multiplicative thinking, the key to understanding rational number and developing efficient mental and written computation strategies in later years.

LEVEL 4 – Partitioning, the missing link in building common fraction and decimal knowledge and confidence.

LEVEL 5 – Proportional reasoning, extending what is known about multiplication and division beyond rule-based procedures to solve problems involving fractions, decimals, per cent, ratio, rate and proportion.

LEVEL 6 - Generalising: Skills and knowledge to support equivalence of number properties and patterns, and the use of algebraic test without which it is impossible to engage with broader curricula expectations at this level.
What is Trusting the Count?
How many?
What did you see?
Or this:
What did you see?
But what about?
Trusting the count is evident when children:

• know that counting is an **appropriate response** to questions which ask how many;

• believe that counting the same collection again will always produce the **same result** irrespective of how the objects in the collection are changed or manipulated;

• are able to invoke a range of **mental objects** for each of the numbers 0 to ten (including part-part-whole knowledge, visual imagery) without having to make or count the numbers; and

• are able to use small collections as units when counting larger collections (recognise **numbers as composite units**).
The numbers 0 to 9 are the only numbers most of us ever need to learn ... it is important to know everything there is to know about each number.

For this collection, we need to know that it:

- can be counted by matching number names to objects: “one, two, three, four, five, six, seven, eight” and that the last one says, how many;
- can be described as eight or 8; and it
- is 1 more than 7 and 1 less than 9.
But we also need to know 8 in terms of its parts and how it relates to 10 – this is called **part-part-whole** knowledge, that is,

8 is

2 less than 10
6 and 2 more
4 and 4
double 4
3 and 3 and 2
5 and 3, 3 and 5
2 less than 10

Differently configured ten-frames are ideal for this
Interpret / visualise numbers beyond ten:

8 and 8 ... 16

1 ten and 6 more ... 16

To build a sense of numbers beyond ten
At home you can...

- Play dominoes
- Use playing cards (numbers)
- Games with dice
- Stories
- Tens Frames
- Concrete materials
What do we mean by Place Value?
PLACE VALUE GAME

Each player has a game sheet and takes it in turns to throw 2 ten-sided dice.

The numbers are used to create 2-digit numbers, e.g., a 5 and a 2 could be recorded as 25 or 52.

Players record their numbers in the most appropriate position between 0 and 100.

If numbers cannot be placed, the player misses his/her turn.

The winner is the first to fill all places.

100
INTRODUCING PLACE-VALUE:

1. Establish the **new unit** – 10 ones is 1 ten

2. Introduce the **names** for the multiples of ten.

3. **Make, name and record regular** examples of the 2-digit place-value pattern

4. **Make, name and record** the teen numbers.

5. **Consolidate** through comparing, ordering, counting forwards and backwards in place-value parts and renaming.

Place-value is all about pattern recognition and use – it is essentially multiplicative
Introduce names for multiples of ten

Establish regular names before “irregular” names - emphasise pattern

SIX-ty

SEVEN-ty

EIGHT-ty

NINE-ty (cardinal)

thirty (three-ty)

fifty (five-ty) (ordinal)

twenty (two-ty)

forty (four-ty) (misspelt)

No one-ty to support the pattern
Make, name & record tens and ones: for 20 - 99
(regular numbers first)

“Make me ...” read, write, name record

<table>
<thead>
<tr>
<th>“Make me ...”</th>
<th>read, write, name</th>
<th>record</th>
</tr>
</thead>
<tbody>
<tr>
<td>6 tens 7 ones</td>
<td>sixty-seven</td>
<td>6 7</td>
</tr>
<tr>
<td>3 tens 4 ones</td>
<td>thirty-four</td>
<td>3 4</td>
</tr>
<tr>
<td>4 tens 0 ones</td>
<td>forty</td>
<td>4 0</td>
</tr>
</tbody>
</table>

3 of these and 4 of those
If this shape had to cover 24, what is the largest number it could cover?
Cover up

Every child, every opportunity
Make, name & record thousands, hundreds, tens and ones

“Make me 4 thousands, 3 hundreds, 7 tens and 6 ones”

It’s said and read as: “4 thousand 3 hundred and seventy-six”

<table>
<thead>
<tr>
<th>thousands</th>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>43</td>
<td>7</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>437</td>
<td>6</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>4376</td>
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</tbody>
</table>

Record:
Renaming

<table>
<thead>
<tr>
<th>hundreds</th>
<th>tens</th>
<th>ones</th>
</tr>
</thead>
<tbody>
<tr>
<td>246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>renamed as</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or</td>
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</tbody>
</table>

246

2 hundreds
4 tens
6 ones

1 hundred
14 tens
5 ones

24 tens
6 ones

246 ones
At home you can…

- Play ‘guess my number’
- 100s charts / 120s number charts
- Jigsaws with numbers
- Snakes and Ladders
- Games
- Stories
- Concrete materials – pasta, pop sticks
What do we mean by Multiplicative Thinking?
• How many blue dots do you see?

• How do you know?

• How do children know how many blue dots there are?
Count the Dots

- How many blue dots are there now?

- How many blue dots are under the rectangle?

- How would students work out the number of blue dots under the rectangle?
• Research into problems at senior levels in mathematics can be traced back to students not being able to apply multiplication facts.

• Students with high levels of multiplicative thinking are better equipped to learn complex algebra, probability theory, statistics and to apply thinking and reasoning to unfamiliar problems.
What is ‘Multiplicative Thinking’?

• Multiplicative Thinking **IS NOT** …*knowing your times tables*

• Multiplicative Thinking **IS** …*knowing when to apply multiplication to solve problems*
At home you can…

• Pose problems
  
  E.g. We have made 5 lolly bags full of lollies. Each bag has 10 lollies, how many lollies have we packed?

• Concrete materials
• Multiplication tables to 10x10
  
  * To be fluent by the end of grade 4
What do we mean by Partitioning?

$$56 = 50 + 6$$
Partitioning is the breaking down of a number into several components according to its place value.

E.g. $485 = 400 + 80 + 5$

The zeros represent a place holder of the other digits (e.g. tens and units) and without them the number would simply look like a single unit of 4.
1. Partitioning and doubling

Why do we need to partition when doubling?

By partitioning a number we can use known doubles of smaller numbers and then add these together to calculate the answer.

E.g. double 47 is not a double that most people know of by heart.
BUT if you partition it into tens and units
( 40 + 7)

Double 40 is relatively easy = 40 x 2 = 80
Double 7 is a known double = 7 x 2 = 14

Add these together \( \rightarrow \)
\[
\begin{array}{c}
80 \\
+ 14 \\
\hline
94 \\
\end{array}
\]

Have a go at this calculation using your knowledge of partitioning and known doubles.

Q. What is double 67?
2. Partitioning and halving

Why do we need to partition when halving?

By partitioning a number we can use known halves of smaller numbers and then add these together to calculate the answer.

E.g. half of 58
BUT if you partition 58 into tens and ones
(50 + 8)
Half of 50 = 25 (½ or divide by 2)
Half of 8 = 4
Add these together → 25
+ 4
29

Have a go at this calculation using your knowledge of partitioning and known halves.

Q. What is half of 38?
The Four Operations

How to use the 4 operations effectively.

---

Every child, every opportunity
CONCEPTS FOR MULTIPLICATION: ARRAYS:

4 threes or 3 fours

Strategies: mental strategies that build-on-from-known, eg, doubling and addition strategies
CONCEPTS FOR DIVISION:

1. How many groups in (quotition):

12 counters

Strategies: make-all/count-all groups, repeated addition
2. Sharing (partition):

18 counters

18 sweets shared among 6. How many each?

Strategy: ‘Think of Multiplication’, eg, 6 what’s are 18? 6 threes
MENTAL STRATEGIES FOR MULTIPLICATION FACTS

0 x 0 TO 9 x 9:

• Doubles and doubles ‘reversed’ (twos facts*)
• Doubles and 1 more group ... (threes facts)
• Double, doubles ... (fours facts)
• Same as (ones and zero facts)
• Relate to ten (fives and nines facts)
• Rename number of groups (remaining facts)

* 2 ones, 2 twos, 2 threes, 2 fours, 2 fives, 2 sixes etc
Traditional Multiplication ‘Tables’:

The ‘traditional tables’ are not really tables at all but lists of equations which count groups, for example:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1 x 3 = 3</td>
<td>1 x 4 = 4</td>
</tr>
<tr>
<td>2 x 3 = 6</td>
<td>2 x 4 = 8</td>
</tr>
<tr>
<td>3 x 3 = 9</td>
<td>3 x 4 = 12</td>
</tr>
<tr>
<td>4 x 3 = 12</td>
<td>4 x 4 = 16</td>
</tr>
<tr>
<td>5 x 3 = 15</td>
<td>5 x 4 = 20</td>
</tr>
<tr>
<td>6 x 3 = 18</td>
<td>6 x 4 = 24</td>
</tr>
<tr>
<td>7 x 3 = 21</td>
<td>7 x 4 = 28</td>
</tr>
<tr>
<td>8 x 3 = 24</td>
<td>8 x 4 = 32</td>
</tr>
<tr>
<td>9 x 3 = 27</td>
<td>9 x 4 = 36</td>
</tr>
<tr>
<td>10 x 3 = 30</td>
<td>10 x 4 = 40</td>
</tr>
<tr>
<td>11 x 3 = 33</td>
<td>11 x 4 = 44</td>
</tr>
<tr>
<td>12 x 3 = 36</td>
<td>12 x 4 = 48</td>
</tr>
</tbody>
</table>

This is grossly inefficient.

3 fours is not seen to be the same as 4 threes ...

10’s and beyond not necessary.
MENTAL STRATEGY FOR DIVISION:

- Think of multiplication

Eg, 56 divided by 7? …
THINK: 7 what’s are 56?
… 7 sevens are 49, 7 eights are 56
So, 56 divided by 7 is 8

Work with fact families:

What do you know if you know that 6 fours are 24?

4 sixes are 24,
24 divided by 4 is 6,
24 divided by 6 is 4,
1 quarter of 24 is 6,
1 sixth of 24 is 4
Multiply 2-digit by 1-digit numbers:

34 x 7 =

1: Mentally:

THINK:
7 by 3 tens, 21 tens, and 7 fours … 210 and 28 … 238 … OR? …

2: Using Number Expanders:

7 by 4 ones … 28 ones
Rename as 8 ones and 2 tens.

7 by 3 tens … 21 tens, and 2 more tens, 23 tens
Record with the tens
Multiply 2-digit by 2-digit numbers:

\[
\begin{array}{c}
1 \\
33 \\
\times 24 \\
\hline
132 \\
660 \\
\hline
792
\end{array}
\]

Ones by ones ...
4 ones by 3 ones is 12 ones.
Record and rename as 2 ones and 1 ten

Ones by tens ...
4 ones by 3 tens is 12 tens and 1 more ten, 13 tens, record

Tens by ones ...
2 tens by 3 ones is 6 tens.
Record as 6 tens and 0 ones

Tens by tens ...
2 tens by 3 tens is 6 hundreds.
Record 6 hundreds. Add together to find total
Divide whole numbers by ones:

**Mentally:**

\[ \text{569} \div 8 \]

**THINK:**

8 what’s are about 569?
8 by 7 tens is 56 tens … 560
enough for 1 more eight … so 71 and 1 remainder

**Using Materials:**

\[ \text{569} \div 8 \]

Can we share hundreds among 8? No, rename into tens.

Can we share 56 tens among 8? Yes, 7 each

What’s left to share? 9 ones, 1 each and 1 remaining
Divide whole numbers:

\[
\begin{array}{c}
8 \overline{) 4576} \\
572 \\
8 \overline{) 4576}
\end{array}
\]

Can I share 4 thousands easily among 8? No. Rename 45 hundreds to share
Can I share 45 hundreds easily among 8? Yes, 5 hundreds
40 hundreds are shared out.
5 hundreds remain
Can I share 5 hundreds easily among 8?
No: remain – 57 tens to share
Can I share 57 tens easily among 8
Yes 7 tens
56 tens are shared out
1 ten remain
Can I share 16 ones?
Yes 2 ones
Addition:

**HOW?**

\[
\begin{align*}
16 & \quad +16 \\
\underline{+16} & \quad 122
\end{align*}
\]
Addition:

\[
\begin{array}{c}
486 \\
+ 165 \\
\hline
651 \\
\end{array}
\]

6 and 5 ones = 11 ones. Rename and record as 1 ten and 1 one.
8 and 6 tens + 1 ten = 15 tens. Rename and record as 1 hundred and 5 tens.
4 and 1 hundreds = 5 hundreds PLUS 1 hundred = 6 hundreds.
Subtraction:

Can I take away 5 ones from 3 ones? No. Rename as 1 ten as 10 ones leaving 4 tens 13 ones.
13 ones take away 5 ones = 8.
Can I take away 7 tens from 4 tens? No. Rename 1 hundred leaving 3 hundreds and 14 tens.
Can I take 7 tens from 14 tens? Yes = 7 tens.
Can I take away 3 hundreds away 1 hundreds? Yes = 2 hundreds.
At home you can...

- Promote maths as ‘fun’ and a ‘good challenge’
- Talk about maths in terms of real life; model when you are using it!
- Provide opportunities to add, subtract, multiply and divide
- Look it up! Youtube is an awesome resource! There is more than one way to work it out!
- Don’t leave it for your hubby / wife to do – we can all do maths!
- Use trial and error, estimation and tools / concrete materials as much as possible
- Create / embrace problem solving situations
Information about additional support programs at OGPS

Kristy Hannan-Cuthbertson is employed to assist children who need extra support with Maths in the grade 1 area. Kristy is uses two programs called ‘Catch up Numeracy’ and ‘GRIN’ (Getting Ready in Numeracy.)
Resources

http://www.khanacademy.org/


http://arb.nzcer.org.nz/supportmaterials/maths/concept_map_basic_facts.php


Thank you!!

- Recommended reading: 
  *Maths for Mums and Dads*
  by Rob Eastaway and Mike Askew