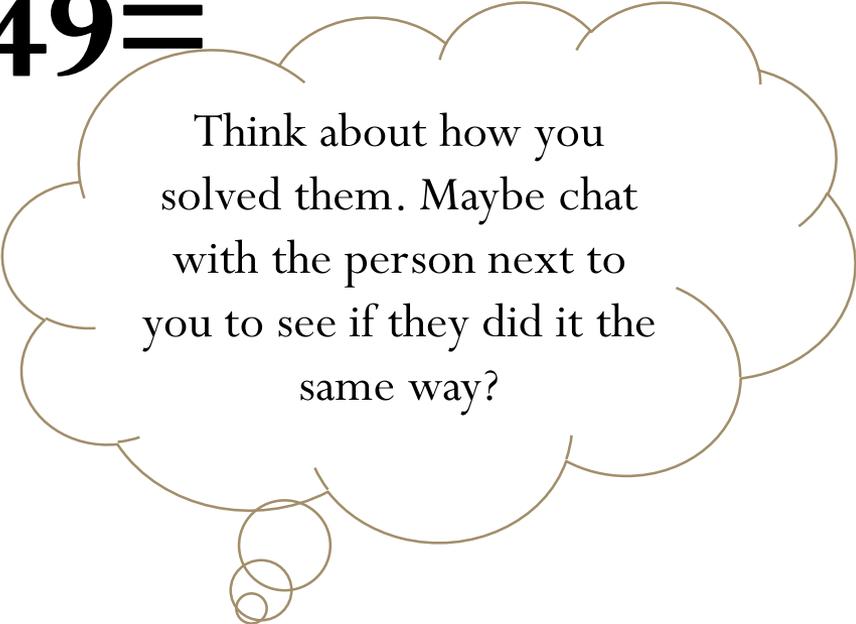


Parent Information Session

What is happening in the classroom?

Let's get our brains thinking?

$$26 + 49 =$$



Think about how you solved them. Maybe chat with the person next to you to see if they did it the same way?

$$5 + 5 + 5 + 295 + 295 + 295 =$$

What is my child learning?

The Australian Curriculum sets consistent high standards for what all young Australians should learn as they progress through schooling. It prepares Australia's next generation for the future and lays the building blocks for generations to come.

Mathematics across Foundation to Year 12

Although the curriculum is described year by year, this document provides advice across four year groupings on the nature of learners and the relevant curriculum:

- Foundation –Year 2: typically students from 5 to 8 years of age
- Years 3–6: typically students from 8 to 12 years of age
- Years 7–10: typically students from 12 to 15 years of age
- Senior secondary years: typically students from 15 to 18 years of age.

Foundation – Year 2

- The early years (5–8 years of age) lay the foundation for learning mathematics. Students at this level can access powerful mathematical ideas relevant to their current lives and learn the language of mathematics, which is vital to future progression.
- Children have the opportunity to access mathematical ideas by developing a sense of number, order, sequence and pattern; by understanding quantities and their representations; by learning about attributes of objects and collections, position, movement and direction, and by developing an awareness of the collection, presentation and variation of data and a capacity to make predictions about chance events.
- Understanding and experiencing these concepts in the early years provides a foundation for algebraic, statistical and multiplicative thinking, that will develop in subsequent years. These foundations also enable children to pose basic mathematical questions about their world, to identify simple strategies to investigate solutions, and to strengthen their reasoning to solve personally meaningful problems.

Years 3–6

- These years emphasise the importance of students studying coherent, meaningful and purposeful mathematics that is relevant to their lives. Students still require active experiences that allow them to construct key mathematical ideas, but also gradually move to using models, pictures and symbols to represent these ideas.
- The curriculum develops key understandings by extending the number, measurement, geometric and statistical learning from the early years; by building foundations for future studies through an emphasis on patterns that lead to generalisations; by describing relationships from data collected and represented; by making predictions; and by introducing topics that represent a key challenge in these years, such as fractions and decimals.
- In these years of schooling, it is particularly important for students to develop a deep understanding of whole numbers to build reasoning in fractions and decimals and to develop a conceptual understanding of place value. These concepts allow students to develop proportional reasoning and flexibility with number through mental computation skills, and to extend their number sense and statistical fluency.

How do we know what's next?

Mathematics – Scope and Sequence for the Australian Curriculum – Foundation to Year 6									
Number and Algebra		Measurement and Geometry			Statistics and Probability				
Number and Place Value	Fractions and Decimals	Money & Financial Matters	Patterns and Algebra	Units of Measure	Shape	Location and Transformation	Geometric Reasoning	Chance	Data Representation and Interpretation
Establish understanding of the language & processes of counting by naming numbers in sequences, initially to and from 20, moving from any starting point Connect number names, numerals & quantities, including 0, initially up to 10 & then beyond Subitize small collections of objects Represent practical situations to model addition & sharing Compare, order & make correspondence between collections, initially to 20, & explain reasoning			Sort and classify familiar objects & explain the basis for these classifications. Copy, continue & create patterns with objects & drawings	Use direct & indirect comparisons to decide which is longer, heavier or holds more, & explain reasoning in everyday language Compare & order the duration of events using everyday language of time Connect days of the week to familiar events & actions	Sort, describe & name familiar 2D shapes & 3D objects in the environment	Describe position & movement			Answer yes/no questions to collect information
1. Develop confidence with number sequences to & from 100 by ones from any starting point. Skip count by 2s, 5s and 10s starting from 0 Recognise, model, read, write & order numbers to at least 100 and locate these numbers on a number line Count collections to 100 by partitioning numbers using place value Represent & solve simple addition & subtraction problems using a range of strategies including counting on, partitioning & rearranging parts	Recognise and describe one-half as one of two equal parts of a whole.	Recognise, describe and order Australian coins according to their value	Investigate & describe number patterns formed by skip counting & patterns with objects	Measure and compare the lengths and capacities of pairs of objects using uniform informal units Informal units Tell time to the halfhour Describe duration using months, weeks, days and hours	Recognise & classify familiar 2D shapes & 3D objects using obvious features	Observe & follow directions to familiar locations		Identify outcomes of familiar events involving chance & describe them using everyday language such as 'will happen', 'won't happen' or 'might happen'	Choose simple questions & gather responses Represent data with objects & drawings where 1 object or drawing represents 1 data value Describe the displays
2. Investigate number sequences, initially those increasing & decreasing by 2s, 3s, 5s & 10 from any starting point, then moving to other sequences. Recognise, model, represent & order numbers to at least 1000 Group, partition & rearrange collections up to 1000 in 100s, 10s and 1s to facilitate more efficient counting Explore the connection between addition & subtraction Solve simple addition & subtraction problems using a range of efficient mental & written strategies Recognise and represent multiplication as repeated addition, groups & arrays Recognise & represent division as grouping into equal sets & solve simple problems using these representations	Recognise and interpret common uses of halves, quarters and eighths of shape and collections	Count and order small collections of Australian coins according to their value	Describe patterns with numbers & identify missing elements Solve problems by using number sentences for addition or subtraction	Compare & order several shapes & objects based on length, area, volume and capacity using appropriate uniform informal units Compare masses of objects using balance scales Tell time to the 1/4-hour, using the language of 'past' & 'to' Name & order months & seasons Use a calendar to identify the date & determine the number of days in each month	Describe & draw 2D shapes, with & without digital technologies Describe & feature of 3D objects	Interpret simple maps of familiar locations & identify the relative positions of key features Investigate the effect of 1-step slides & flips with & without digital technologies Identify & describe 1/2 & 1/4 turns		Identify practical activities & everyday events that involve chance. Describe outcomes as 'likely' or 'unlikely' & identify some events as 'certain' or 'impossible'	Identify a question of interest based on 1 categorical variable Other data relevant to the question Collect, check & classify data Create displays of data using lists, tables & picture graphs & interpret them
3. Investigate the conditions required for a number to be odd or even & identify odd & even numbers Recognise, model, represent & order numbers to at least 10,000 Apply place value to partition, rearrange & regroup numbers to at least 10,000 to assist calculations & solve problems Recognise & explain the connection between addition & subtraction Recall addition facts for single-digit numbers & related subtraction facts to develop increasingly efficient mental strategies for computation Recall multiplication facts of 2, 3, 5 & 10 & related division facts Represent & solve problems involving multiplication using efficient mental & written strategies & appropriate digital technologies	Model and represent unit fractions including 1/2, 1/4, 1/3, 1/5 and their multiples to a complete whole	Represent money values in multiple ways and count the change required for simple transactions to the nearest 5 cents	Describe, continue & create number patterns resulting from performing addition or subtraction	Measure, order & compare objects using familiar metric units of length, mass & capacity Tell time to the minute & investigate the relationship between units of time	Make models of 3D objects & describe key features	Create & interpret simple grid maps to show position & pathways Identify symmetry in the environment	Identify angles as measures of turn & compare angle sizes in everyday situations	Conduct chance experiments, identify & describe possible outcomes & recognise variation in results	Identify questions or issues for categorical variables Identify data sources & plan methods of data collection & recording Collect data, organise into categories & create displays using lists, tables, picture graphs & simple column graphs, with & without the use of digital technologies Interpret & compare data displays
4. Recall multiplication facts up to 30 × 30 & related division facts Investigate & use the properties of odd & even numbers Recognise, represent & order numbers to at least 100 of 1000s Apply place value to partition, rearrange & regroup numbers to at least 100 of 1000s to assist calculations & solve problems Investigate number sequences involving multiples of 2, 4, 6, 7, 8, & 9 Develop efficient mental & written strategies & use appropriate digital technologies for multiplication & for division where there is no remainder	Investigate equivalent fractions used in contexts Count by 1/4s, 1/2s and 1/3s, including with mixed numerals. Locate & represent these fractions on a number line Recognise that the place value system can be extended to tenths & hundredths. Make connections between fractions & decimal notation	Solve problems involving purchases and the calculation of change to the nearest five cents with and without digital technologies Use equivalent number sentences involving addition & subtraction to find unknown quantities	Explore & describe number patterns resulting from performing multiplication Solve word problems by using number sentences involving multiplication or division where there is no remainder Use equivalent number sentences involving addition & subtraction to find unknown quantities	Use scaled instruments to measure & compare lengths, masses, capacities & temperature Convert between units of time Use am & pm notation & solve simple time problems Compare objects using familiar metric units of area & volume	Compare the areas of regular & irregular shapes by informal means Compare & describe 2D shapes that result from combining & splitting common shapes, with & without the use of digital technologies	Use simple scales, legends & directions to interpret information contained in basic maps Create symmetrical patterns, pictures & shapes with & without digital technologies	Compare angles & classify them as equal to, greater than or less than a right angle	Describe possible everyday events & order their chances of occurring Identify everyday events which 'cannot happen' if the other happens Identify events where the chance of 1 will not be affected by the occurrence of the other	Select & trial methods for data collection, including survey questions & recording sheets Construct data displays, with & without the use of digital technologies, from given or collected data Include tables, column graphs & picture graphs where 1 picture can represent many data values Evaluate the effectiveness of different displays in illustrating data features including variability
5. Identify & describe factors & multiples of whole numbers & use them to solve problems Use estimation & rounding to check the reasonableness of answers to calculations Solve problems involving multiplication of large numbers by 1- or 2-digit numbers using efficient mental, written strategies and appropriate digital technologies Solve problems involving division by a 1 digit number, including those that result in a remainder Use efficient mental & written strategies & apply appropriate digital technologies to solve problems	Compare & order common unit fractions & locate & represent them on a number line Investigate strategies to solve problems involving addition & subtraction of fractions with the same denominator Recognise that the place value system can be extended beyond hundredths Compare, order & represent decimals	Create simple financial plans	Describe, continue & create patterns with fractions, decimals & whole numbers resulting from addition & subtraction Use equivalent number sentences involving multiplication & division to find unknown quantities	Choose appropriate units of measurement for length, area, volume, capacity & mass Calculate the perimeter & area of rectangles using familiar metric units Compare 12- & 24-hour time systems & convert between them	Connect 3D objects with their nets & other 2D representations	Use a grid reference system to describe locations Describe routes using landmarks & directional language Describe translations, reflections & rotations of 2D shapes. Identify line & rotational symmetries Apply the enlargement transformation to familiar 2D shapes & explore the properties of the resulting image compared with the original	Estimate, measure & compare angles using degrees Construct angles using a protractor	List outcomes of chance experiments involving equally likely outcomes & represent probabilities of those outcomes using fractions Recognise that probabilities range from 0 to 1	Pose questions and collect categorical or numerical data by observation or survey Construct displays, including column graphs, dot plots & tables, appropriate for data type, with & without the use of digital technologies Describe & interpret different data sets in context
6. Identify & describe properties of prime, composite, square & triangular numbers Select & apply efficient mental & written strategies & appropriate digital technologies to solve problems involving all 4 operations with whole numbers Investigate everyday situations that use integers. Locate & represent these numbers on a number line	Compare fractions with related denominators & locate & represent them on a number line Solve problems involving addition & subtraction of fractions with the same or related denominators Find a simple fraction of a quantity where the result is a whole number, with & without digital technologies Add & subtract decimals, with & without digital technologies, & use estimation & rounding to check the reasonableness of answers Multiply decimals by whole numbers & perform divisions by non-0 whole numbers where the results are terminating decimals, with & without digital technologies Multiply & divide decimals by powers of 10 Make connections between equivalent fractions, decimals & percentages	Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies	Continue & create sequences involving whole numbers, fractions & decimals Describe the rule used to create the sequence Explore the use of brackets & order of operations to write number sentences	Connect decimal representations to the metric system Convert between common metric units of length, mass & capacity Solve problems involving the comparison of lengths & areas using appropriate units Connect volume & capacity & their units of measurement Interpret & use timetables	Construct simple prisms & pyramids	Investigate combinations of translations, reflections & rotations, with & without the use of digital technologies Introduce the Cartesian coordinate system using all 4 quadrants	Investigate, with & without digital technologies, angles on a straight line, angles at a point and vertically opposite angles. Use results to find unknown angles	Describe probabilities using fractions, decimals & percentages Conduct chance experiments with both small & large numbers of trials using appropriate digital technologies Compare observed frequencies across experiments with expected frequencies	Interpret & compare a range of data displays, including side-by-side column graphs for 2 categorical variables Interpret secondary data presented in digital media & elsewhere

Developmental Continuum

C. Strategies for addition and subtraction

0. Not apparent.
Not yet able to combine and count two collections of objects.
1. Count all (two collections)
Counts all to find the total of two collections.
2. Count on
Counts on from one number to find the total of two collections.
3. Count back/count down to/count up from
Given a subtraction situation, chooses appropriately from strategies including count back, count down to and count up from.
4. Basic strategies (doubles, commutativity, adding 10, tens facts, other known facts)
Given an addition or subtraction problem, strategies such as doubles, commutativity, adding 10, tens facts, and other known facts are evident.
5. Derived strategies (near doubles, adding 9, build to next ten, fact families, intuitive strategies)
Given an addition or subtraction problem, strategies such as near doubles, adding 9, build to next ten, fact families and intuitive strategies are evident.
6. Extending and applying addition and subtraction using basic, derived and intuitive strategies
Given a range of tasks (including multi-digit numbers), can solve them mentally, using the appropriate strategies and a clear understanding of key concepts
7. Extending and applying addition and subtraction strategies – fractions and decimals

Classroom then vs now?

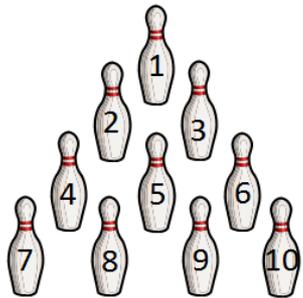
Then	Now
<ul style="list-style-type: none">• Chalk and talk	<ul style="list-style-type: none">• Proficiency strands
<ul style="list-style-type: none">• ROTE learning	<ul style="list-style-type: none">• Student focussed
<ul style="list-style-type: none">• Everyone doing the same thing	<ul style="list-style-type: none">• Differentiation
<ul style="list-style-type: none">• Pen and Paper	<ul style="list-style-type: none">• Hands On Resources
<ul style="list-style-type: none">• Calculator	<ul style="list-style-type: none">• 21st Century Technology
<ul style="list-style-type: none">• Learn a process	<ul style="list-style-type: none">• Learning strategies

Let's explore mathematics

Around the room are some mathematics games that your children are familiar with and we would like you to explore. When playing the games think about what skills your child might be learning.

Let's discuss your thoughts!

Strike



When the three dice are rolled use those numbers to cover numbers 1—10. You can use any process you like and change the numbers around to get your answers.

The dice are rolled again and again and again. Keep going until they cover all numbers. To make it harder roll the dice faster.

ROLL **3** and do the math! + - =

Roll 3 die, use the three numbers to make an equation. You can add them, subtract them, or do both!
Your goal is to make an equation that equals one of the answers on the board. When you make a number, cover it!
If the number is already covered, try to make a different number on the board by adding or subtracting the 3 numbers.
If you can't, you lose a turn. Whoever has the majority of the board covered wins!

1	2	3	4	5	6
7	8	9	10	11	12
13	14	15	16	17	18

Remember you must use all 3 numbers that the 3 dice land on in your equation!

Sheep Subtraction!

1. Roll a die and put some white sheep in the field.
2. Roll the die and make the fox chase that number of sheep away.
3. Count the remaining sheep and write the total.

total

© Copyright 2012, www.sparklebox.co.uk

Need more info....

Feel free to pop in and visit the maths mentor to have a chat!

Or email them 😊

kelly.janelle.e@edumail.vic.gov.au

johnson.tania.m@edumail.vic.gov.au

green.anita.j@edemail.vic.gov.au