

Mathematics Early Stage 1- Kindergarten Examples

Children will learn to:	Home activities to support this learning:
Count aloud to 30, count a collection and recognise numbers to 20	<p>Grab a handful of pegs- 'How many?' 'Let's write this number.' 'What is one more/less?'</p> <p>Identify numbers in the environment e.g. letter boxes, newspapers, shops, houses</p> <p>See how many without counting e.g. dice, placemats, wheels, toothbrushes</p> <p>Dot cards- 'How many?' (Without counting)</p> <p>Rhymes and songs</p>
Manipulate objects such as counters to help add and subtract	<p>Use home objects 2 spoons and 5 people. 'How many more do we need?'</p> <p>Cooking- 'One more cup makes two altogether'</p> <p>Play games with everyday objects eg '2 brown cars and two more red cars. How many are there?'</p>
Use the language of money in everyday situations e.g. coins, notes, dollars	<p>Shopping – e.g. 'Find the gold coins.'</p> <p>Canteen</p>
Count forwards by one to add and backwards by one to subtract	<p>Count pieces of fruit e.g. grapes. 'How many left if I eat one?'</p>
Name the days of the week	<p>Songs and rhymes</p> <p>Talk about today is..., tomorrow will be ...; Weekly calendar – 'Yesterday was, so today is'</p>
Tell the time to the hour e.g. four o'clock	<p>Relate time to the beginning of TV shows. 'It's 5 o'clock so it's time for'</p> <p>Relate time to daily events. 'It's 8 o'clock so it's time to leave for school'</p> <p>Find clocks in the house, at the shops etc.</p> <p>Talk the hands on clocks- 'The long hand is near number 12 And the short is pointing to Its 3 o'clock.'</p>
Identify and name simple shapes e.g. circles, squares	<p>Recognise shapes within the house- e.g. 'The door is a rectangle'</p> <p>Find shapes in picture books</p>
Use positional terms e.g. between, under, right left	<p>When getting dressed, tidying up and putting things away, sitting in the car</p>
Recognise that halves are equal parts	<p>When cutting up fruit, cakes, bread, paper</p> <p>Fold cards</p>

Mathematics Stage 1- Year 1 Examples

Children will learn to:	Home activities to support this learning:
<p>State the place value of digits in two-digit numbers</p> <p>E.g. 'in the number 32, the 3 represents 30 or 3 tens'</p>	<p>Use environmental materials (straws, pegs, leaves etc.) into tens and ones</p> <p>Talk about footy score, addresses, shopping, TV channels</p> <p>Use pack of cards (remove picture cards) and make different number e.g. 93 or 39. Say the number, write the number, make the collection. Make these with bundles (tens) and ones e.g. 3 tens and nine ones</p> <p>Notice number patterns e.g. street addresses (odd and even) Speed limits (tens and ones)</p>
<p>Begin to model multiplication using concrete numbers e.g. 3×2 is the same as 3 groups of 2 or an array (dots in rows and columns) of 3 rows of 2</p>	<p>Notice arrays e.g. pattern on carpets, chocolate box (three rows of 4), egg cartons</p> <p>Construction toys e.g. Lego blocks – 3 blocks on 2 towers has the same number of blocks as two blocks on 3 towers</p> <p>Use collector cards or objects to make equal rows e.g. 12 cards- find different ways to make equal rows</p> <p>Tell stories e.g. 'A clown has six balloons. She has the same amount in each hand. How many in each hand?'</p>
<p>Describe halves and quarters found in everyday life</p>	<p>Use household food and items e.g. , quarter of an orange, half a sausage, half a glass of milk (must be equal parts)</p> <p>Cut objects and compare to see if they are equal or not equal</p> <p>Cut birthday cake into half, then a quarter</p> <p>Measure when cooking</p> <p>Tell stories e.g. 'A ladybeetle has four spots. Half were on one wing and half were on the other wing.'</p>
<p>Use the terms 'add', 'plus', 'equals', 'is equal to', 'take away', 'minus' and 'the difference between'</p>	<p>Through stories e.g. 'There were 12 apples on the tree. A boy took away three from the tree. How many are there now on the tree?'</p> <p>Use these terms when talking about the homework tasks</p> <p>Find friends to 10</p>
<p>Measure the length of everyday items</p>	<p>Cut dough into lengths and find something in the house that is the same length.</p> <p>Match household items that are the same length e.g. a pencil and a spoon, peg and a snow pea</p> <p>Pretend to be a builder and use dad's tape measure. 'What numbers did you see?'</p>
<p>Recognise, describe and order Australian coins according to their value</p>	<p>Buy items when shopping</p> <p>Pretend play shopkeepers</p> <p>Sort a jar of coins 'How are they different/ same?'</p> <p>Put the silver coins in order of their numbers (value)</p>

Mathematics Stage 1- Year 2 Examples

Children will learn to:	Home activities to support this learning:
Read clock on the half hour	<p>Look at a variety of clocks, both analogue and digital.</p> <p>Talk about TV shows, what time they start and how long they run</p> <p>When cooking discuss the time it will take to cook a dish. And what time it will be ready.</p> <p>Talk through sport or activity times on the weekend.</p>
Count, read and write numbers to 1000	<p>Sequence numbers, e.g. addresses</p> <p>Practise reading and writing numbers as the children come across them</p> <p>Use playing cards e.g. turn over 3 cards- find all the different numbers that can be made, write these.</p>
<p>Begin to model division using concrete objects, E.g. 6/3 is the same as sharing 6 objects into 3 equal groups</p>	<p>Sharing objects such as pegs, spoons, and sharing them into equal groups. Find different ways to share 16 or 24.</p> <p>Sharing vegetables for the evening meal- divide equally</p> <p>Party organisation – share lollies into lolly bags</p>
Record area by describing the number and the type of unit e.g. The area of the surface is 20 tiles.'	<p>Cover surfaces with everyday household items e.g. magazines, books or newspapers</p> <p>books with pencils</p>
Use a calendar to calculate the number of months, weeks and days until an upcoming event.	<p>Locate birthdays and special events on calendar – count down to these birthdays, outings, holidays e.g. 12 more days</p> <p>Look at the school term and find how many weeks; how many weeks to go till the holidays</p>
<p>Begin to understand and draw graphs and diagrams of data</p> <p>E.g. use simple picture graphs and tables</p>	<p>Compare heights of family members and record using a picture format</p>
Count forwards and backwards by twos, threes and fives	<p>TV channels count up by 2's, 3's, 5's to other certain channels</p> <p>Use coins and Lego blocks to count amounts moving groups of 2's, 3's or 5's</p> <p>Count the number of feet (2's) for family members; fingers on hands (5's)</p>

Mathematics Stage 2- Year 3 Examples

Children will learn to:	Home activities to support this learning:
Develop mental strategies to multiply a one-digit number of 10	Calculate using tens e.g. '3 x 2 tens is 6 tens. This is the same as 60.' 3 x 20 is the same as 20 + 20+20 or double 20 and 20 more
Identify, represent and compare fractions involving halves, quarters, thirds and fifths	Break up a chocolate bar, cookies, pizza or fruit and discuss the parts.
Record area in square centimetre using words and abbreviation for square-centimetres (cm ²)	Measure small areas in the house e.g. bath mat, beach towel, table e.g. 55 square centimetres, 55 cm ²
Recall multiplication facts (times tables) of 2,3,5 and 10 e.g. 10 x 10	DVD or CD of songs, YouTube clips , tables placemat, posters in bedroom on toilet door Call out tables while driving (both in order but more importantly in a random order) Talk in 'groups of' or 'rows of' when manipulating everyday materials eg party lolly bags. 'How many of each lolly will we need? (e.g. 5 bags and 3 lollipops in each bag)
Organise data to create and interpret tables and graphs	Family data e.g. birthday list, age, height Read TV guides or other timetables
Count forwards and backwards by tens and hundreds e.g. 1220, 1230, 1240 or 423, 323, 223	'What do you notice about how the tens/hundreds digits are changing?' Play counting forwards and backwards in the car, varying the 'starting number' and the place value
Add three or more single-digit numbers e.g. 2 + 3+ 4 = 9	Practise in the car Add up pocket/canteen money Add small amounts of money while shopping e.g. 3 dollars and five more and two more equals ten dollars Use small items to help e.g. spoons, pegs Use a number line , tape measure or ruler e.g. 'Start at 5 and add three more, then four more'
Measure lengths and distances using metres and centimetres.	Use a tape measure Read road signs e.g. ...km to destination
Identify and name 3D objects e.g. pyramid, cylinder, cones and spheres	Label everyday items e.g. an ice-cream <u>cone</u> 'What 3D object did you use in your Lego structure?'

Cut out pictures of objects from magazines and sort into groups eg spheres. Make a collage

Mathematics Stage 2- Year 4 Examples

Children will learn to:	Home activities to support this learning:
Round numbers to the nearest ten, hundred, thousand or ten thousand e.g. 67 rounds to 70	Round money and calculate change e.g. \$175 means I will have \$125 change from \$200 'do I have enough money for....?'
Investigate equivalence using various methods	Use a number line or a calculator to show that $\frac{1}{2}$ is the same as 0.5 or 5/10 Link to money e.g. shopping signs of 10% off
Use a tape measure or ruler to measure lengths and distances	Measure height of furniture or family members Discuss the length of sport fields and the line marking intervals e.g. half way is 50 metres. Measure length of driveway or backyard
Develop mental strategies to divide one-digit numbers	63 divided by 9 = 7 because I know that $7 \times 9 = 63$ Celebrations e.g. 42 smarties need to be added to 6 cakes. How many on each?
Determine factors for a given number	The factors of 12 are 1,2,3,4,6,12. Prove the answer – 1×12 , 2×6 , 3×4
Use a compass to find north, south, east and west	On a family driving trip discuss the direction of sunrise/sunset, which direction that the car is currently travelling Use a compass when bushwalking or during orientation experiences
Recognise and describe angles, e.g. acute angles, right angles	Find angles in the environment e.g. windows, doors, staircase; angles in a baseball diamond Label the angles for goal kicks e.g. acute or obtuse
Recognise there are 1000 grams in one kilogram	Discuss quantities when cooking Compare items when shopping
Convert units of time e.g. 60 seconds = 1 minute, 60 minutes = 1 hour	Time activities e.g. time taken to cook a roast, watch a TV show, run 100 metres
Identify and sketch 3D objects including prisms, cylinders and cones, and investigate their use in commercial packaging	Look in the pantry to find examples and explain why this shape has been used Talk about how many faces, vertices, edges

Mathematics Stage 3- Year 5 Examples

Children will learn to:	Home activities to support this learning:
Read, write and order numbers to at least tens of millions	<p>Write large quantities and familiarise children with place values in numbers</p> <p>Read larger amounts</p> <p>Write amounts using correct spacing</p>
Measure angles of up to 360 degrees using a protractor	<p>Measure angles of household items e.g. door frames, door openings</p> <p>Identify angles in sporting activities e.g. skateboarding, gymnastics</p> <p>Hardware supplies e.g. 90^o angle pipe, spirit level 180^o</p>
Record lengths and distances using combinations of millimetres, centimetres and kilometres, e.g. 1 km, 200m	<p>When in the car use the odometer to measure distances</p> <p>Calculate distances based on speed</p> <p>Estimate arrival time based on speed and distance</p>
Calculate the areas of rectangles by multiplying the length by the width	<p>Use examples from their environment such as a door, TV, cupboard, garden bed, handball court, computer screen</p> <p>When walking estimate sizes e.g. parks, netball court, touch football field</p>
Add three or more numbers with different digits, with and without digital technologies	<p>Write quantities in different ways e.g. 42 000 + 5123 + 246</p> <p>Look at prices of objects in the For Sale section of the newspaper. Select a few items and find the total</p> <p>Round up or down</p> <p>Estimate large quantities</p>
Multiply three- and four- digit numbers by one-digit numbers e.g. 673 x 4	<p>Start with numbers ending in zero e.g. 670 x 2</p> <p>Use table facts</p>
<p>Create, with materials, or digital technologies, a variety of patterns using whole numbers, fractions or decimals</p> <p>E.g. $\frac{1}{4}$, $\frac{2}{4}$, $\frac{3}{4}$, $\frac{4}{4}$ or 2.2, 2.0, 1.8, 1.6</p>	<p>Create a pattern giving the first four numbers, swap patterns and solve</p> <p>Use money examples</p>

Mathematics Stage 3- Year 6 Examples

Children will learn to:	Home activities to support this learning:
Use 24 hour time and am and pm notation	Read 24 hour time on appliances, DVD recorders, flight times Read timetables e.g. bus, ferry,
Calculate simple fractions and percentages of an amount	Shopping- $\frac{1}{5}$ of a box of 30 mangoes is 6, 25 % of \$200 = \$50
Construct 3D models of prisms and pyramids and sketch front, side and top view	Draw an aerial view of the backyard, imagine the house from a plane Clay and plasticine or alfoil or toothpicks and blue tac models
Identify and name parts of a circle, including centre, radius, diameter, circumference, sector, semicircle and quadrant	Identify sections of a games court e.g. handball court Cooking dimensions e.g. diameter of a cooking tin Cutting food into sections Purchasing pizza
Find a location on a map that is a given direction from a town or landmark	When driving find a town that is in a specific direction ie is north-east of Broken Hill, Train map- 'What is the next station if you are travelling west?' Use maps to locate places or landmarks in relation to other markers, e.g. 'What famous landmark is north east of Darling Harbour?' Use family road trips to find locations on the map that you are driving toward.
Add and subtract decimals with a different number of decimal places, with and without digital technologies	$2.0 + 0.75 + 0.005 = 2.8$ Relate decimals to money Make cake, measure grams
Solve addition and subtraction word problems with more than one operation	Create scenarios 'if I received \$50 a week for The Manly Daily run over a year and I wanted to buy a computer for 1725 how much would I have left?' I have \$40 000 to buy a car. The car is \$ 36 118. I want to add tinted windows for \$860. How much do I have left over?