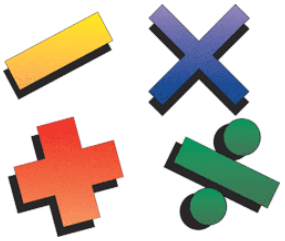
Mathematics Overview of Learning
Week 3-4 Term 4



Black indicates the content descriptor from the beginning of the continuum of learning in each stage (as stated by the Australian Curriculum).

Red indicates the content descriptor aligned with further understanding later in the continuum of learning in each stage (as stated by the Australian Curriculum).

Kindergarten

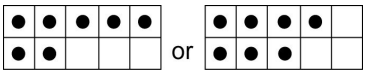
Week 3 Addition and Subtraction MAe1-5NA
Represent practical situations to model addition and sharing (ACMNA004)

Week 4 Multiplication and Division MAe1-6NA
Investigate and model equal groups
Record grouping and sharing using informal methods

Activities to support learning at home:

Addition and Subtraction

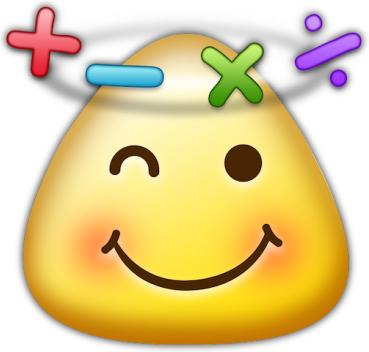
- combine two or more groups of objects to model addition
- model subtraction by separating and taking away part of a group of objects. Ask questions to model thinking.
- use fingers to model and solve simple addition and subtraction problems
- compare two groups of objects to determine 'how many more'
- create and recognise combinations for numbers to at least 10, eg 'How many more make 10?'



- Addition worksheet
  https://www.mathworksheets4kids.com/addition/picture/complete-upto5-1.pdf

Multiplication and Division

- use the term 'group' to describe a collection of objects
- use the term 'sharing' to describe the distribution of a collection of objects
- model equal groups
- recognise groups that are not equal in size
- label the number of objects in a group
- Challenge: Multiplication worksheet
  https://www.mathworksheets4kids.com/multiplication/models/equal-groups-describe1.pdf



Stage 1

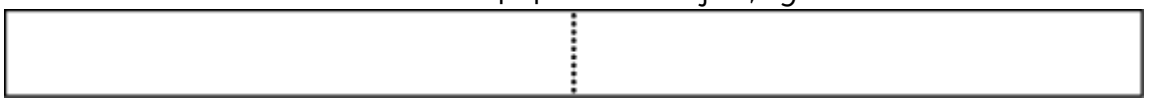
Fractions and Decimals MA1-7NA

Recognise and describe one-half as one of two equal parts of a whole (ACMNA016)

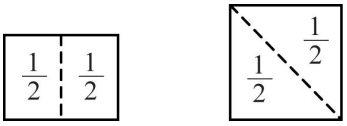
Recognise and interpret common uses of halves, quarters and eighths of shapes and collections (ACMNA033)

Activities to support learning at home:

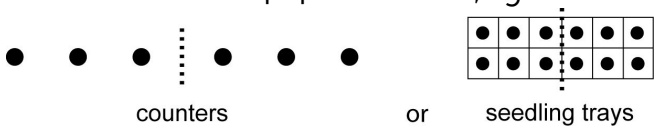
- use concrete materials to model half of a whole object, eg



- describe two equal parts of a whole object, eg 'I folded my paper into two equal parts and now I have halves'
- describe parts of a whole object as 'about a half', 'more than a half' or 'less than a half'
- record two equal parts of whole objects and shapes using pictures and the fraction notation for half (½), eg



- use concrete materials to model half of a collection, eg

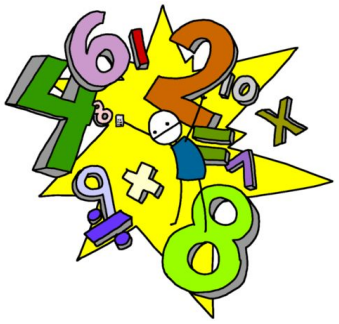


- Worksheet https://www.mathworksheets4kids.com/fractions/color-half.pdf
- use concrete materials to model a half, a quarter or an eighth of a whole object, eg divide a piece of ribbon into quarters

- create quarters by halving one-half, eg 'I halved my paper then halved it again and now I have quarters'
- discuss with your child why ⅛ is less than ¼ , eg if a cake is shared among eight people, the slices are smaller than if the cake is shared among four people
- Worksheet http://www.k5learning.com/sites/all/files/worksheets/grade-1-fractions-halves-quarters-1.pdf
- Model for your child when objects and shapes have been shared into halves, quarters or eighths
- use concrete materials to model a half, a quarter or an eighth of a collection, eg

quarters

- Model using fraction language in a variety of everyday contexts, eg the half-hour, one-quarter of the class



Stage 2

Week 3-4 Multiplication and Division MA2-6NA
Represent and solve problems involving multiplication using efficient mental and written strategies and appropriate digital technologies (ACMNA057)
Develop efficient mental and written strategies, and use appropriate digital technologies, for multiplication and for division where there is no remainder (ACMNA076)
Use mental strategies and informal recording methods for division with remainders

Activities to support learning at home:
Multiplication and Division

- Have your child use mental strategies to multiply a one-digit number (0-9) by a multiple of 10 (eg. 10, 20, 30, 40 etc). Assist them by modelling and consolidating the following strategies, including:

➔ repeated addition, eg **3 × 20**: 20 + 20 + 20 = 60
➔ Using place value concepts, eg **3 × 20**: 3 × 2 tens = 6 tens = 60
➔ factorising the multiple of 10, eg **3 × 20**: 3 × 2 × 10 = 6 × 10 = 60

- You can also try using division to help them justify answers, eg 12 ÷ 3 is 4 because 4 × 3 = 12
- Worksheet https://www.mathworksheetsland.com/3/12mul1by10/ip.pdf
- Create multiplication problems for your child where they must multiply three or more single-digit numbers, eg 5 × 3 × 6
- The associative property is an important concept for students to understand. A multiplication algorithm is associative because the product will always be the same no matter which order the numbers appear in the problem. Model this with your children to help them understand, eg 2 × 3 × 5 = 2 × 5 × 3 = 10 × 3 = 30
- Division worksheet https://www.mathworksheets4kids.com/division/sentence-1.pdf
- Division worksheet https://www.mathworksheets4kids.com/division/facts/1to3.pdf

Stage 3

Week 3 Fractions and Decimals MA3-7NA

Recognise that the place value system can be extended beyond hundredths (ACMNA104)
Compare, order and represent decimals (ACMNA105)
Add and subtract decimals... (ACMNA128)
Multiply decimals by whole numbers and perform divisions by non-zero whole numbers where the results are terminating decimals... (ACMNA129)
Multiply and divide decimals by powers of 10 (ACMNA130)
Make connections between equivalent fractions, decimals and percentages (ACMNA131)
Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items.... (ACMNA132)

Week 4 Angles MA3-16MG

Estimate, measure and compare angles using degrees (ACMMG112)
Investigate, with and without the use of digital technologies, angles on a straight line, angles at a point, and vertically opposite angles; use the results to find unknown angles (ACMMG141)

Activities to support learning at home:

Fractions and Decimals

- This specific content focuses on students being able to express thousandths as decimals as well as state the place value of digits in decimal numbers up to three decimal points. Whilst the following worksheet may be challenging, it is good practice to assist students with being able to "say" decimal numbers
  https://www.mathworksheets4kids.com/number-names/decimals/words-thousandths-1.pdf
- Comparing decimals up to thousandths worksheet
  https://www.math-drills.com/decimal/comparing_decimals_thousandths_001.php
- Addition, subtraction and multiplication of decimals covers a lot of explicit instruction. Have your child try some of these worksheets at home to consolidate their work in the mathematics classroom:
- Adding decimals tutorial
  https://www.khanacademy.org/math/arithmetic/arith-decimals/arith-review-add-decimals/v/adding-decimals-example-1
- Adding decimals worksheet
  https://www.mathsisfun.com/worksheets/ws-dec.html?op=add&n=20&amin=11&amax=99&bmin=11&bmax=99&dec=3
- Subtracting decimals worksheet
  https://www.mathsisfun.com/worksheets/ws-dec.html?op=sub&n=20&amin=11&amax=99&bmin=11&bmax=99&dec=3&negans=n
- Multiplying decimals worksheet
  https://www.mathworksheets4kids.com/decimals/multiplication/tenths1.pdf
- Pecentage discounts worksheet
  https://www.worksheetworks.com/pdf/_02/ukzs/WorksheetWorks_Calculating_Prices_1.pdf

Angles

- When measuring angles, it is an essential skill to be able to use and read a protractor. The following worksheet will assist students with consolidating their skill in doing this
  https://www.mathworksheets4kids.com/angles/measuring/reading-protractor-level11.pdf
- Once students understand angle properties, they can then use their existing understanding to find the value of unknown angles. Try the following worksheets to calculate the unknown angles: https://www.mathworksheets4kids.com/angles/measuring/one-step1.pdf OR
  https://www.mathworksheets4kids.com/angles/pairs/line-standard-easy1.pdf

Websites to further develop times tables recall:
http://tablestest.com/
http://www.topmarks.co.uk/maths-games/7-11-years/times-tables