**Transition: Counting from One by Imaging (CA) to Advanced Counting (AC)**

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**Domain: Ratios and Proportions**

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| **Achievement Objectives** | **Number: Levels 1 and 2** |
| **Level One**  Number Strategies AO1:  Use a range of counting, grouping, and equal-sharing strategies with whole numbers and fractions  **Level Two**  Number Knowledge AO2:  Know the basic addition and subtraction facts |

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| **Strategies being developed** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Find simple fractions of shapes and lengths starting with halves and quarters, then moving to thirds, fifths and tenths | Find halves, quarters, and eighths of varying shapes and objects - discussing whether the shares are ‘fair’ (equal). Using reflective and rotational symmetry to determine equality, by mapping pieces on top of one another.  Teacher records symbols and discusses the meaning of top and bottom numbers.  Problems are extended to thirds, fifths and tenths. | ***Teaching Fractions, Decimals and Percentages (Book 7)***  [Fair Shares](https://nzmaths.co.nz/node/906) (11-14)  ***BSM***  9-2-4, 9-2-5, 9-2-45, 9-2-18, 9-2-61, 9-2-85, 10-2-16, 11-1-18, 11-1-59, 11-2-59, 12-2-3, 12-2-4, 12-2-9,  12-2-15, 12-2-44, 12-2-45, 12-2-50, 12-2-51, 12-2-81, 12-2-7, 12-3-49, 12-3-50, 12-3-51, 12-3-83, 12-3-84  ***Figure It Out***  N 2.2 (6) [It’s a Magic Mish-mash](https://nzmaths.co.nz/node/3082) | Developing common vocabulary for fractions, particularly halves, quarters, thirds, fifths.  Extending this to eighths, sixteenths, tenths, sixths, to develop understanding of ‘-ths’. | Various classroom objects including paper strips, squares, rectangles, triangles and circles, glasses of water, amounts of play dough, etc. |

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| **Strategies being developed** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Find a fraction of a number by sharing out the objects equally, moving towards anticipating the sharing by imaging or skip-counting.  Emphasis on halves, quarters, eighths, thirds and fifths. | Find halves, quarters of sets by equal sharing of objects.  Anticipate the sharing of objects by imaging or skip-counting e.g. 1/4 of 12 by sharing 12 objects into four sets or by trial skip-counting 3,6,9,12.  1/2 of 14 = 🞏  1/4 of 12 = 🞏  1/8 of 24 = 🞏  1/3 of 15 = 🞏  1/5 of 20 = 🞏 | As for previous strategy outcome.  ***Teaching Fractions, Decimals and Percentages (Book 7)***  Introduction (4-10)  [Fair Shares](https://nzmaths.co.nz/node/906) (11-14)  ***BSM***  9-3-10, 9-3-53, 11-2-18 | Identify the symbols for halves, quarters, thirds, and fifth | ***Teaching Number Knowledge (Book 4)***  [Fraction Pieces](https://nzmaths.co.nz/node/1044) (6)  [Creating Fractions](https://nzmaths.co.nz/node/1045) (6)  ***BSM***  9-2-18, 9-2-61,  9-2-85, 11-2-59 |
|  |  |  | Recall the doubles to 20, e.g. 7 + 7 = 14.. | ***Teaching Number Knowledge (Book 4)***  [Double Trouble](https://nzmaths.co.nz/node/1088) (32)  ***Figure It Out***  N 2.2 [Helping Hands](https://nzmaths.co.nz/node/3053) (3)  ***BSM***  10-1-6, 10-1-47,  10-1-48, 10-1-83 |