**Transition: Advanced Counting to Early Additive Domain: Multiplication and Division**

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| **Achievement Objectives** | **Number: Level 2**  | **Number: Level 3** |  **Algebra: Level 3** |
| Number Strategies AO1:Use simple additive strategies with whole numbers and fractions.Number Knowledge AO1:Know forward and backward counting sequences with whole numbers to at least 1000. | Number Strategies AO1:Use a range of additive and simple multiplicative strategies with whole numbers, fractions, decimals, and percentages.Number Knowledge AO1:Know basic multiplication and division facts. | Equations and Expressions AO1:Record and interpret additive and simple multiplicative strategies, using words, diagrams, and symbols, with an understanding of equality.  |

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| **Strategies being developed** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Solve multiplication problems using repeated addition | 2 × 6 = 🞏 so 3 × 6 = 🞏4 × 5 = 🞏 so 5 × 5 = 🞏, 6 × 5 = 🞏5 × 8 = 🞏 so 6 × 8 = 🞏, 7 × 8 = 🞏10 × 4 = 🞏 so 11 × 4 = 🞏,12 × 4 = 🞏 | ***Teaching Multiplication and Division (Book 6)***Introduction (11-12) [Three’s Company](https://nzmaths.co.nz/node/1024) (12-14)[Animal Arrays](https://nzmaths.co.nz/node/919) (15-16) ***Figure It Out***N 2.1 [Multiplying Madness](https://nzmaths.co.nz/node/3063) (12)N 2.1 [The Pig Pen](https://nzmaths.co.nz/node/3065) (13)N 2.2 [To Market](https://nzmaths.co.nz/node/3091) (16-17)BF2-3 [An Apple A Day](https://nzmaths.co.nz/node/2862) (9)BF 2-3 [On Track](https://nzmaths.co.nz/node/2863) (10)BF 3 [Field of 100 Sheep](https://nzmaths.co.nz/node/2894) (16-17) | Say the forwards and backwards skip-counting sequences in the range 0-100 for twos, threes, fives, and tens at least. | ***Teaching Number Knowledge (Book 4)***Counting (11)[Skip-counting on the Number Line](https://nzmaths.co.nz/node/1055) (11)[Using Calculators](https://nzmaths.co.nz/node/1059) (14)***Figure It Out***N 2-3 (16) [Stepping Ou](https://nzmaths.co.nz/node/3125)t**BSM**1-3-12, 11-3-13, 11-3-54, 11-3-55, 11-3-85, 12-3-13 |
| Solve five times tables by doubling and halving (and learn them) | 2 × 10 = 🞏 so 4 × 5 = 🞏 4 × 10 = 🞏 so 8 × 5 = 🞏,6 × 5 = 🞏3 × 10 = 🞏 so 6 × 5 = 🞏,7 × 5 = 🞏4 × 5 = 🞏 so 5 × 5 = 🞏 8 × 5 = 🞏 so 9 × 5 = 🞏 | ***Teaching Multiplication and Division (Book 6)***[Twos, Fives, And Tens](https://nzmaths.co.nz/node/926) (21-23)***Figure It Out***N2.2 [Double Trouble](https://nzmaths.co.nz/node/3092) (18)NS7/8.1 [Flying Feet](https://nzmaths.co.nz/node/4188)  (9) | Recall groupings of two in numbers to 20, groupings of five in numbers to 50, and groupings of 10 in numbers to 100. | ***Teaching Number Knowledge (Book 4)***[Skip-counting on a Number Line](https://nzmaths.co.nz/node/1055) (11)[Beep](https://nzmaths.co.nz/node/1056) (12)[Fabulous Fives](https://nzmaths.co.nz/node/1075) (22)[Tens In Hundreds and More](https://nzmaths.co.nz/node/1082) (27)**BSM**9-1-7, 9-1-8, 9-1-45, 9-1-46, 9-1-83, 9-1-84, 12-1-5, 12-1-44, 12-1-45, 12-1-84 |

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| **Strategies being developed** | **Problem progression** | **References** | **Knowledge being developed** | **Resources** |
| Use the commutative property, e.g. 4 × 6 = 6 × 4 | * 5 × 6 = 🞏 as 6 × 5 = 🞏

9 × 2 = 🞏 as 2 × 9 = 🞏10 × 7 = 🞏 as 7 × 10 = 🞏100 × 6 = 🞏 as 6 × 100 = 🞏50 × 2 = 🞏 as 2 × 50 = 🞏 | ***Teaching Multiplication and Division (Book 6)***Introduction (11-12) [Animal Array](https://nzmaths.co.nz/node/919)s (15-16)[Turn Abouts](https://nzmaths.co.nz/node/922) (34-36) ***Figure It Out***BF 3 [Choco-blocks](https://nzmaths.co.nz/node/2888) (10) | Automatically recall the multiplication and division facts for the multiples of 2, 5, and 10. | ***Teaching Number Knowledge (Book 4)***[Number Mats and Number Fans](https://nzmaths.co.nz/node/1092) (34)[Bowl a Fact](https://nzmaths.co.nz/node/1094) (35)[In and Out](https://nzmaths.co.nz/node/1095) (36)[Multiplication Flash Cards](https://nzmaths.co.nz/node/1100) (38) |
| Dividing by sharing using addition to predict | 10 ÷ 2 = 🞏 so 20 ÷ 4 = 🞏12 ÷ 2 = 🞏 so 12 ÷ 4 = 🞏16 ÷ 2 = 🞏 so 16 ÷ 4 = 🞏so 16 ÷ 8 = 🞏100 ÷ 2 = 🞏 so 100 ÷ 4 = 🞏 | ***Teaching Multiplication and Division (Book 6)***Introduction (11-12) [Pirate Crews](https://nzmaths.co.nz/node/925) (17-18) ***Figure It Out***N 2.2 [The Dinosaur Dig](https://nzmaths.co.nz/node/3093) (19) | Record the results of mental multiplication calculations using equations and diagrams | ***Figure It Out***BF 2-3 [Times Up](https://nzmaths.co.nz/node/2861) (8)BF 2-3 [An Apple a Day](https://nzmaths.co.nz/node/2862) (9) |
| Dividing by making equal sets | * Twos in 20 so fours in 20
* Tens in 30 so fives in 30
* Twos in 16 so fours in 16
* Fives in 30 so fives in 60
* Fours in 16 so eights in 16
* Fours in 12 so fours in 24
 | ***Teaching Multiplication and Division (Book 6)***[Biscuit Boxes](https://nzmaths.co.nz/node/924) (19-20)***Figure It Out***N 2.2 [The Dinosaur Dig](https://nzmaths.co.nz/node/3093) (19) |  |  |