

# Northcote Kāhui Ako Additive Thinking Curriculum Progress Outcomes and Learning Sequence

Key:

Early Numeracy	Y1	Y2	Y3	Y4	Y5	Y6	Y7
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Y1 = Year 1

Terms used:

- Without Renaming in Addition - when the corresponding place value digit numbers (e.g. the ones, the tens, and the hundreds) add up to 9 or less e.g.  $23 + 15$ ,  $245 + 32$ )
- Without Renaming in Subtraction - when a bigger digit number takes away a smaller digit number of the same place value, e.g.  $28 - 16$ ,  $276 - 135$
- Renaming in Addition - when the corresponding place value digit numbers add up to more than 9, e.g.  $28 + 17$ ,  $75 + 62$ )
- Renaming in Subtraction - when a smaller digit number takes away a bigger digit number of the same place value, e.g.  $26 - 18$ ,  $137 - 74$

	Curriculum progress outcomes	Learning Sequence Goals
6 months	Subitise to 6  Join and separate groups of up to a total of 10 objects, and find the result by grouping and counting	Count in ones up to 10
		Compare numbers
		Add up to 10 by counting on in ones
		Subtract up to 10 by counting back in ones
Y1	Recognise instantly the total number of objects in two patterns, each of up to five objects  Partition and recombine sets of up to 10 in different ways  Recognise and represent in different ways, including in te reo Māori, the tens-and-one structure of teen numbers (11-19).	Solve addition problems up to 20 by counting on in ones. $7 + 5 =$
		Solve subtraction problems up to 20 by counting back in ones $13 - 4 =$
		Solve addition problems up to 10 $3 + 2 = 5$ $5 + 4 = 9$ $2 + 4 = 6$ $2 + 8 = 10$
		Solve subtraction problems up to 10

	<p>Join and separate groups of up to a total of 20 objects, and find the difference between groups by grouping and counting</p>	<p> <math>5 - 4 = 1</math>      <math>8 - 5 = 3</math>      <math>7 - 3 = 4</math>      <math>10 - 7 = 3</math>            Solve addition problems with teen numbers  <math>10 + 3 = \_\_\_</math>      <math>4 + \_\_\_ = 14</math>      <math>17 + 2 = \_\_\_</math>      <math>3 + \_\_\_ = 17</math>            Solve subtraction problems with teen numbers  <math>13 - 3 = \_\_\_</math>      <math>17 - 10 = \_\_\_</math>      <math>16 - 4 = \_\_\_</math>      <math>16 - \_\_\_ = 5</math>            Solve addition problems up to 20  <math>17 + 3 = \_\_\_</math>      <math>12 + \_\_\_ = 20</math>            Solve subtraction problems up to 20  <math>20 - 3 = \_\_\_</math>      <math>20 - 16 = \_\_\_</math>      <math>20 - \_\_\_ = 8</math> </p>
Y2	<p>Partition a pattern of up to 10 objects, instantly recognise the number of objects in each part, and confirm the total number in the pattern using the parts (Year 1 learning goals)</p> <p>Group, partition, and recombine whole numbers up to 100</p> <p>Add and subtract numbers up to 100 by grouping and using number patterns</p>	<p>           Solve addition problems with -ty numbers  <math>20 + 30 = \_\_\_</math>      <math>40 + \_\_\_ = 60</math>      <math>42 + 8 = \_\_\_</math>      <math>\_\_\_ + 36 = 40</math>  <math>70 + 30 = \_\_\_</math>      <math>20 + \_\_\_ = 100</math>            Solve subtraction problems with -ty numbers  <math>90 - 20 = \_\_\_</math>      <math>80 - \_\_\_ = 60</math>      <math>40 - 7 = \_\_\_</math>      <math>80 - \_\_\_ = 74</math>  <math>100 - 30 = \_\_\_</math>      <math>100 - \_\_\_ = 20</math>            Solve 2-digit addition problems without renaming  <math>32 + 54</math>            Solve 2-digit subtraction problems without renaming  <math>84 - 32</math>            Solve 1 digit addition problems with renaming, up to 100  <math>48 + 7</math> </p>
Y3	<p>Recognise, read, write, and order whole numbers up to 10,000</p> <p>Recall AddSub facts to 20 (Year 1 learning goals)</p> <p>The commutative property applies to addition (e.g., <math>2 + 5 = 5 + 2</math>)</p> <p>The additive identity is 0 (e.g., <math>4 + 0 = 4</math> and <math>5 - 0 = 5</math>)</p> <p>Solve true and false number sentences and open number sentences</p> <p>Group, partition, and recombine whole numbers up to 1,000</p> <p>Add &amp; Subtract 2- and 3-digit numbers</p>	<p>           Solve 1-digit subtraction problems with renaming, up to 100  <math>37 - 9</math>            Solve 2-digit addition problems with renaming  <math>46 + 27</math>            Solve 2-digit subtraction problems with renaming  <math>74 - 38</math>            Solve 3-digit addition problems without renaming  <math>326 + 542 =</math> </p>

		Solve 3-digit subtraction problems without renaming $894 - 231 =$
Y4	Recognise, read, write, order, partition, recombine, and represent whole numbers up to 10,000 (from NZC Year 3 Progress Outcome)	Solve addition and subtraction problems using number pairs that make 100 and 1,000. $72$ and ? make 100 $238$ and ? make 1,000
	Use their recalled addition and subtraction basic facts to solve problems	Solve 2- and 3-digit addition problems with renaming $346 + 127$ $346 + 83$
	Add and subtract two- and three-digit numbers reliably and efficiently	Solve 2- and 3-digit subtraction problems with renaming $374 - 58$ $364 - 187$
	Solve addition and subtraction open number sentences using the relationship between the two sides of the equal sign.	Solve 4-digit addition problems without renaming $5326 + 3061 =$
		Solve 4-digit subtraction problems without renaming $7594 - 6473 =$
Y5	Add or subtract any whole numbers reliably and efficiently	Solve 4-digit addition problems with renaming $6,475 + 2,989$
	Recognise, read, write, order, partition, recombine, and represent whole numbers up to 100,000	Solve 4-digit subtraction problems with renaming $6,546 - 2,678$
	Solve open number sentences involving all operations using the relationship between the two sides of the equal sign	Solve 5-digit addition problems with or without renaming $25,428 + 74,359$
		Solve 5-digit subtraction problems with or without renaming $26,054 - 14,578$
Y6	Recognise, read, write, order, partition, recombine, and represent whole numbers up to 1,000,000 Add and subtract whole numbers	Solve 6-digit addition problems with or without renaming $254,287 + 747,856$
	Recognise, read, write, represent, compare, and order decimals (to three places).	Solve 6-digit subtraction problems with or without renaming $540,703 - 276948$
	Add and subtract decimal numbers to two places	Solve addition problems with 2 decimal places, with or without renaming $4.8 + 7.5$ $4.95 + 7.5$

<p>Use the associative property in addition (e.g., <math>3 + (2 + 7) = (3 + 2) + 7</math>).</p> <p>Solve open number sentences and true or false number sentences involving equality or inequality <math>&lt;</math>, <math>\leq</math>, <math>&gt;</math>, <math>\geq</math>, <math>\neq</math></p>	<p>Solve subtraction problems with 2 decimal places, with or without renaming</p> <p><math>5.33 - 2.5</math>                      <math>5.33 - 2.9</math></p>
	<p>Solve addition problems by using the associative property</p> <p>E.g. <math>3,453 + (47 + 2572) = (3,453 + 47) + 2372</math></p>
	<p>Solve open number sentences and true or false number sentences involving equality or inequality <math>&lt;</math>, <math>\leq</math>, <math>&gt;</math>, <math>\geq</math>, <math>\neq</math></p>