Year 2 Mathematics

ACiQ | v9.0

Australian Curriculum v9.0: Using complexity and familiarity to create questions in Mathematics

The QCAA Mathematics standards elaborations use complexity and familiarity to describe the discernible differences between performance levels. Complexity and familiarity are described in the standard elaborations Notes section — Table 2. This resource provides examples of questions with different levels of complexity and familiarity for Year 2.

Aspect of the achievement standard	Related content description/s	Examples of evidence	Mathematical proficiencies
Students order and represent numbers to at least 1000, apply knowledge of place value to partition, rearrange and rename two- and three-digit numbers in terms of their parts, and regroup partitioned numbers to assist in calculations.	**Number** • recognise, represent and order numbers to at least 1000 using physical and virtual materials, numerals and number lines AC9M2N01 • partition, rearrange, regroup and rename two- and three-digit numbers using standard and non-standard groupings; recognise the role of a zero digit in place value notation AC9M2N02 • add and subtract one- and two-digit numbers, representing problems using number sentences, and solve using part-part-whole reasoning and a variety of calculation strategies AC9M2N04	• representing numbers to at least 1000	Understanding
		• applying knowledge of place value to partition, rearrange and rename three-digit numbers in terms of their parts • regrouping partitioned numbers to assist in calculations	Fluency

Complexity annotations	Complex unfamiliar questions (A or equivalent)	Familiarity annotations	Complexity annotations	Complex familiar questions (B or equivalent)	Familiarity annotations	Complexity annotations	Simple familiar questions (C or equivalent)	Familiarity annotations
Students work through a number of elements and make a connection between their knowledge of partitioning and subtraction strategies. They solve the problem using part-part-whole reasoning. Interpretation is required to develop a response.	Sky and Robin are describing numbers. Sky said, "My number has 5 hundreds, 6 tens and 3 ones." Robin said, "My number has 68 tens, and 4 ones." Who has the largest number and by how many?	All the information to solve the problem is not immediately identifiable. The required procedure is not clear from the way the problem is posed. The context is unfamiliar to students as it was not the main focus in the teaching and learning program.	Students make connections between Number knowledge. Students use non-standard partitioning to rename, rearrange and regroup. Some interpretation is required to develop a response.	Use non-standard partitioning to rename 709 in three different ways. Student may use physical materials (e.g. base ten blocks, number expander), draw base ten blocks or record numerals and words.	All the information to solve the problem is identifiable. The required procedure is clear from the way the problem is posed. The context is familiar to students as it was a focus in the teaching and learning program.	Students represent a three-digit number in different ways. They apply knowledge of place value to partition the number in terms of its parts, and use physical materials, numerals and number lines. The question is broken into scaffolded parts on the Think Board.	Represent 237 using: Base ten blocks Hundreds chart (Hundreds, Tens, Ones) Abacus (Hundreds, Tens, Ones) Number line (200, 210, 220, 230, 240, 250) Student uses physical materials (base ten blocks).	All the information to solve the problem is identifiable. The required procedure is clear from the way the problem is posed. The context is familiar to students as it was a focus in the teaching and learning program.