Mathematics Assessment Screens

Identify a student's strengths and weaknesses in their mathematical knowledge and skills to enable targeted personalised teaching and ensure progression in thinking mathematically.

The screens are set at curriculum level 1, level 2, level 3 and level 4 assessing knowledge of:

Screening	Level 1	Level 2	Level 3	Level 4
Whole number place value	Counting Sequences (forwards & backwards 1 - 100) 1 after/before 10 more/less	Linguistic - column names Additive structure Importance of 10 Multiplicative Structure Rounding	Linguistic - column names Larger numbers - use of zero Repeated multiplicactive structure Rounding	Larger numbers - use of zero Repeated multiplicative structure Rounding x/÷ by tens Standard form
Addition & Subtraction	Doubles, 5+, within 10, 10+ Repeat of facts to 10 in tens column Additive structure of PV	Basic facts to ten, doubles & teens Basic facts to 20, near doubles & teens Double digit +/- single digit Double digit +/- double digit	Recall of addition & subtraction facts. Use of signs & symbols in a linear equation Double digit +/- Triple digit +/- Additive strategies and/or algorithm	Flexibility - rounding & compensating Written algorithms (inc. decimals) Inverse relationships Estimation
Multiplication & Division	Counting sequences 2s, 5s, 10s Equal sharing/group-ing PV groupings of 10 Recall x2 x5 x10 (understanding X symbol)	Equal grouping/equal sharing Understanding × as alternative to repeated addition Array representation of X Understanding of ÷ symbol Basic multiplication facts Double digit x single digit	Recall of x/÷ facts Double digit by single digit multiplication Division of double or triple digit by single digit	Factors & Multiples Flexibility using PV Double digit x single digit Double/triple digit ÷ by single digit Double digit x double digit Estimation

Screening	Level 1	Level 2	Level 3	Level 4
Fractions	not assessed	Unit fraction of a shape Unit fraction of a set Counting in halves Fractions as a result of sharing Unit & non unit fraction of a number	Unit & non unit fraction of a shape Unit and non unit fraction of a set Understanding fractions as numbers Equivalent fractions Connecting multiplication/ division & fractions	Connecting fractions, multiplication & division Equivalent fractions Fractions on a number line Addition/Subtraction of fractions
Decimals & Percentages	not assessed	not assessed	Linguistic - column names Ordering Multiplicative structure Common fraction decimal conversion Common fraction percentage conversions	Ordering Repeated multiplicative structure Fraction/decimal conversions Fraction/percentage conversions Mental addition/subtraction

Evidence from the assessment screen can be used to identify the knowledge and skills a student has to be able to work in particular sets as referenced in the additive and multiplicative thinking strands of the mathematics learning progressions.

Screen	Level 1	Level 2	Level 3	Level 4
Whole Number Place Value	Additive Thinking Sets 3 & 4	Additive Thinking Set 4 & 5	Additive Thinking Set 6 & 7	Additive Thinking Set 8
Addition & Subtraction	Additive Thinking Sets 3 & 4 Symbols & Expressions Set 2	Additive Thinking Set 4 & 5	Additive Thinking Set 6 & 7 Symbols & Expressions Set 4	Additive Thinking Set 7 & 8
Multiplication & Division	Multiplicative Thinking Set 2 & 3	Multiplicative Thinking Set 3 & 4 Symbols & Expressions Set 3	Multiplicative Thinking Set 4, 5 & 6 Symbols & Expressions Set 4	Multiplicative Thinking Set 6, 7 & 8
Fractions		Multiplicative Thinking Set 3 & 4	Multiplicative Thinking Set 5 & 6	Multiplicative Thinking Set 6 & 7
Decimals & Percentages				Additive Thinking Set 7 & 8 Multiplicative Thinking Set 8

The mathematics learning progressions refer to sets but the terminology from the digital technologies curriculum is more indicative of what the sets mean - each set is a progress outcome along each of the learning progression within mathematics. To continue to make progress students must also be developing mathematical knowledge and skills.

For teaching and learning the additive and multiplicative thinking progressions are supported by learning experiences in Patterns & Relations, Geometric Thinking, Measurement Sense, Statistical Investigation and Interpreting Statistical and Chance Situations.

Specific attention to the Using Symbols & Expressions progression is required for students to learn to read and write in the written language of mathematics and be able to use mathematics to solve problems.

To be numerate is to have the ability, and inclination to use mathematics at work at home and in the community - as a tool to assist in the solving of problems.