

National Mathematics Panel Report Alignment with The Quantile Framework[®] for Mathematics*



QTaxon Number**	QF Strand	QTaxon Description	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
79	1	Add 2- and 3-digit numbers without regrouping.	1.1.1				
117	1	Subtract 2- and 3-digit numbers with regrouping.	1.1.1				
121	1	Use multiplication facts through 144.			1.1.2		
146	5	Determine perimeter using concrete models, nonstandard units, and standard units.			2.1.1	2.1.2	
153	1	Apply appropriate type of estimation for sums and differences.	1.1.1				
154	1	Identify the place value of each digit in a multi-digit numeral to the thousandths place.		1.2.1			
155	1	Compare and order fractions using renaming strategies.			1.2.2		
156	1	Compare rational numbers in decimal form (tenths and hundredths) with and without models.		1.2.1	1.2.2		
157	1	Compare decimals to fractions (tenths and hundredths) with and without models and pictures.		1.2.1			
162	1	Know and use division facts related to multiplication facts through 144.			1.1.2		
192	5	Determine the area of rectangles, squares, and composite figures using nonstandard units, grids, and standard units.			2.1.1	2.1.2	
195	1	Read, write, and compare numbers with decimal place values to the thousandths place or numbers greater than one million.		1.2.1	1.2.2		
199	1	Add and subtract fractions with like denominators.			1.2.2		
224	1	Multiply two fractions or a fraction and a whole number.				1.2.3	

The field of mathematics education reflects the ongoing work of many outstanding organizations and advisory groups, including the National Council of Teachers of Mathematics (NCTM); the National Assessment Governing Board (NAGB), which oversees NAEP; and the National Mathematics Advisory Panel. An important aspect of these efforts has been the identification of key mathematical topics and concepts within a grade, as well as the progression of topics and concepts across grades. The resulting publications and summaries of these efforts have been aligned with The Quantile Framework for Mathematics, where appropriate.

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QTaxon Number**	QF Strand	QTaxon Description	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
227	1	Relate a percent to its equivalent fraction or decimal.			1.2.2		
231	1	Add and subtract with fractions and mixed numbers that have unlike denominators.			1.2.2		
233	1	Calculate unit rates to make comparisons.			1.2.2		
257	5	Calculate the areas of triangles, parallelograms, trapezoids, circles and composite figures.			2.1.1	2.1.2	
261	1	Model or compute with integers using addition or subtraction.				1.2.4	1.2.5
262	1	Model or compute with integers using multiplication or division.				1.2.4	1.2.5
263	1	Write a proportion to model a word problem; solve proportions.					1.2.5
264	1	Calculate or estimate the percent of a number including discounts, taxes, commissions, and simple interest.					1.2.5
287	5	Use scale factors to reduce and enlarge drawings on grids.					2.1.3
289	5	Use models to find volume for prisms and cylinders as the product of the area of the base (B) and the height. Calculate the volume of prisms.				2.1.2	
292	5	Use proportions to express relationships between corresponding parts of similar figures.					2.1.3
318	5	Use nets or formulas to find the surface area of prisms and cylinders.				2.1.2	
320	5	Calculate the volume of cylinders, pyramids and cones.				2.1.2	
343	5	Find the slope of a line given the graph of the line, an equation of the line, or two points on the line.					2.1.3
362	3	Use direct variation to solve problems.					1.2.5
551	1	Use proportional reasoning to solve problems.			1.2.2		
558	2	Use proportional reasoning to solve problems related to similar and congruent polygons.					2.1.3

QTaxon Number**	QF Strand	QTaxon Description	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7
571	3	Use inverse, combined and joint variation to solve problems.					1.2.5
598	1	Add 2- and 3-digit numbers with regrouping.	1.1.1				
599	1	Subtract 2- and 3-digit numbers without regrouping.	1.1.1				
608	1	Multiply or divide two decimals or a decimal and a whole number.				1.2.3	
609	1	Multiply or divide with mixed numbers.				1.2.3	
622	1	Solve problems with percent equations, percent proportions, or ratios.					1.2.5
630	5	Model the concept of the volume of a solid figure using cubic units.				2.1.2	
642	1	Compute with rational numbers (positive and negative).				1.2.4	1.2.5
648	1	Read and write word names for rational numbers in decimal form to the hundredths place.		1.2.1			
654	1	Write a ratio to compare two quantities.			1.2.2		

Legend: This alignment was based upon the Benchmarks for the Critical Foundations (Table 2, p. 20). The first number refers to the Broader Category (1= Fluency with Whole Numbers; 2= Fluency with Fractions; 3= Geometry and Measurement). The second number refers to the Benchmark under the Category. The last number refers to specific skills listed within the Benchmarks.

* Based on The Final Report of the National Mathematics Advisory Panel (2008).

** QTaxon Number refers to a unique identification number in The Quantile Framework for Mathematics. It is for reference only and is not the Quantile® measure.