

## Arc of Learning for *Let's Be Rational*

The goal of *Let's Be Rational* is to develop meaning for and skill with computations involving fractions. Students will have had some experiences during upper elementary grades with developing fraction operations. Typically, however, students will not have developed a sense of which operation to use in a particular problem situation.

Let's Be Rational: Understanding Fraction Operations					
Operating with Rational Numbers	Introduction Setting the Scene	Exploration Mucking About	Analysis Going Deeper	Synthesis Looking Across	Abstraction Going Beyond
Investigation 1: Extending Addition and Subtraction of Fractions					
1.1 Getting Close: Estimating Sums	1.1	1.1			
1.2 Estimating Sums and Differences			1.2		
1.3 Land Sections: Adding and Subtracting Fractions		1.3	1.3		
1.4 Visiting the Spice Shop: Adding and Subtracting Mixed Numbers			1.4	1.4	
Mathematical Reflections				MR	
Investigation 2: Building on Multiplication With Fractions					
2.1 How Much of the Pan Have We Sold? Finding Parts of Parts		2.1	2.1		
2.2 Modeling Multiplication Situations			2.2	2.2	
2.3 Changing Forms: Multiplication With Mixed Numbers			2.3	2.3	
Mathematical Reflections				MR	
Investigation 3: Dividing With Fractions					
3.1 Preparing Food: Dividing a Fraction by a Fraction		3.1	3.1		
3.2 Into Places: Whole Numbers or Mixed Numbers			3.2		
3.3 Sharing a Prize: Dividing a Fraction by a Whole Number			3.3		
3.4 Examining Algorithms for Dividing Fractions			3.4	3.4	
Mathematical Reflections				MR	
Investigation 4: Wrapping Up the Operations					
4.1 Just the Facts: Fact Families for Addition and Subtraction				4.1	
4.2 Multiplication and Division Fact Families				4.2	
4.3 Becoming an Operations Sleuth				4.3	4.3
Mathematical Reflections					MR
Looking Back					LB