Arc of Learning for Looking for Pythagoras

In *Looking for Pythagoras*, students explore two big ideas: the Pythagorean Theorem and real numbers. In the process of solving the Problems in this Unit, students also review and make connections among the concepts of area, distance, and irrational numbers.

Looking for Pythagoras: The Pythagorean Theorem ■ Pythagorean Theorem ■ Irrational Numbers	Introduction *Setting the Scene*	Exploration *Mucking About*	Analysis *Going Deeper*	Synthesis *Looking Across*	Abstraction *Going Beyond*
Investigation 1: Coordinate Grids					
1.1 Driving Around Euclid: Locating Points and Finding Distances	1.1 1.1				
1.2 Planning Parks: Shapes on a Coordinate Grid	1.2 1.2				
1.3 Finding Areas	1.3 1.3				
Mathematical Reflections	MR MR				
Investigation 2: Squaring Off					
2.1 Looking for Squares		2.1 2.1			
2.2 Square Roots		2.2 2.2			
2.3 Using Squares to Find Lengths		2.3 2.3			
2.4 Cube Roots		 2.4			
Mathematical Reflections		MR MR			
Investigation 3: The Pythagorean Theorem					
3.1 Discovering the Pythagorean Theorem		 3.1	3.1 		
3.2 A Proof of the Pythagorean Theorem		 3.2	3.2 		
3.3 Finding Distances		 3.3	3.3 		
3.4 Measuring the Egyptian Way: Lengths That Form a Right Triangle		 3.4	3.4 		
Mathematical Reflections		 MR	MR 		
Investigation 4: Using the Pythagorean Theorem: Understanding Real Numbers					
4.1 Analyzing the Wheel of Theodorus: Square Roots on a Number Line		 4.1	4.1 		
4.2 Representing Fractions as Decimals		 4.2	 4.2		
4.3 Representing Decimals as Fractions		 4.3	 4.3		
4.4 Getting Real: Irrational Numbers			4.4 4.4		
Mathematical Reflections			MR MR		
Investigation 5: Using the Pythagorean Theorem: Analyzing Triangles and Circles					
5.1 Stopping Sneaky Sally: Finding Unknown Side Lengths			5.1 5.1	5.1 	
5.2 Analyzing Triangles			5.2 5.2	5.2 	
			5.3	5.3	

5.3 Analyzing Circles			5.3		
Mathematical Reflections			MR	MR	
Looking Back			LB		LB