

# CONTENTS

<b>Refreshing Your Skills: Special Right Triangles</b>	<b>1</b>
<b>Right Triangle Trigonometry</b>	<b>5</b>
Investigation: Steep Steps	9
<b>The Law of Sines</b>	<b>13</b>
Investigation: Oblique Triangles	13
<b>The Law of Cosines</b>	<b>23</b>
Investigation: Around the Corner	25
<b>Extending Trigonometry</b>	<b>31</b>
Investigation: Extending Trigonometric Functions	31
<b>Defining the Circular Functions</b>	<b>37</b>
Investigation: Paddle Wheel	38
<b>Radian Measure</b>	<b>45</b>
Investigation: A Radian Protractor	46
<b>Performance Task</b>	<b>54</b>
Exploration: Circular Functions	55
<b>Graphing Trigonometric Functions</b>	<b>59</b>
Investigation: The Pendulum II	62
<b>Performance Task</b>	<b>70</b>
<b>Inverses of Trigonometric Functions</b>	<b>71</b>
Investigation: Exploring the Inverses	72
<b>Mid-term Review</b>	<b>79</b>
<b>Modeling with Trigonometric Equations</b>	<b>83</b>
Investigation: A Bouncing Spring	85
<b>Identities and the Unit Circle</b>	<b>91</b>
Investigation: What's My Sine?	92
<b>Pythagorean Identities</b>	<b>95</b>
Investigation: Pythagorean Identities	96
<b>More Trigonometric Identities</b>	<b>101</b>
Investigation: The Sum and Difference Identities	102
<b>Solving Trigonometric Equations</b>	<b>109</b>
Investigation: Finding All of the Solutions	109
<b>Introduction to Vectors</b>	<b>115</b>
Investigation: Vector Addition and Subtraction	116
<b>Complex Numbers in Polar Form</b>	<b>125</b>
Investigation: Multiplication in Polar Form	127
<b>Parametric Equations</b>	<b>131</b>
Investigation: Parametric Walk	132
Exploration: Polar Coordinates	139
<b>Final Review</b>	<b>143</b>