

Trigonometry

Trigonometry					
(revised 2008)	Levels: I - introduced; P - practiced; M - mastered			Current Text	
CONCEPT	SKILLS	LEVEL	Chapter	Teaching Notes	STATE GOALS
<b>I. Right Triangle Trigonometry</b>					
			4	MUST supplement	
	1. Review 30-60-90; 45-45-90 relationships	P, M			9.B.4
	2. Review definitions of Sine, Cosine, Tangent	P, M			
	3. Understand and apply Laws of Sines & Cosines	I, P, M	6.1		
	4. Find Area of Triangle using Trig	I, P, M	6.1		
	5. Solve Applications:	I, P, M			8.C.5, 9.B.5
	a. Depression and Elevation				7.C.4
	b. Navigation & Survey				9.D.4
<b>II. Unit Circle Trigonometry</b>					
			4	MUST supplement	
	1. Understand definition of radian	I, P, M			
	2. Convert between radian/degrees	I, P, M			
	3. Identify Reference & Co-terminal angles	I, P, M			
	4. Compute Arc length & Area of Sectors	I, P, M			
	5. Understand Revolutions & Angular Speed	I, P, M			9.D.5
	6. Translate Sin & Cos to Unit Circle	I, P, M			
	7. Derive Pythagorean Identity	I, P, M			
<b>III. Trig Functions</b>					
			4	MUST supplement	
	1. Understand relationship between Unit Circle and graphs	I, P, M			
	2. Define Inverse Trig functions	I, P, M			
	3. Know how to graph the six Trig Functions	I, P, M			8.B.5
	4. Be able to identify	I, P, M			
	a. domain & range; odd or even	I, P, M			
	b. period, amplitude, shifts & frequency	I, P, M			8.C.4
	c. function from graph and vice-versa	I, P, M			
	5. Evaluate functions & their inverses	I, P, M			8.B.5
<b>IV. Trig Applications</b>					
				MUST supplement	
	Model Periodic/Harmonic Behavior	I, P	throughout		9.D.5, 8.C.5
	Solve periodic applications	I, P			
<b>V. Trigonometric Identities</b>					
			5	MUST supplement	
	1. Know the Definition and Use of:		3		
	a. Co-Function Relationships				
	b. Sum and Difference Identities				8.D.5
	c. Half and Double Angle Identities				

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	d. Even/Odd Identities				
<b>VI. Trigonometric Equations</b>			5	MUST supplement	
	1. Solve Trig Equations:				8.C.4
	a. Using Identities				
	b. Over Restricted & Unrestricted domains				
	c. Applying Algebraic manipulations				
Current Text:					
Precalculus with Limits: A Graphing Approach; 4th edition					
Houghton Mifflin					
pub. 2005					
*This text is referenced in this document, but heavy supplementaion from other sources is required to do justice to the topics above.					