Name	Hr
	Side opposite to angle



Chapter 7 Guided Notes Right Triangles & Trigonometry

Chapter Start Date:____ Chapter End Date:____ Test Day/Date:____

Geometry · Winter Semester

Term	Definition	Example
right triangle		
Theorem 7.1 Pythagorean Theorem		
Pythagorean Triple		

7.1 Apply the Pythagorean Theorem

Common Pythagorean Triples and Some of Their Multiples			
3, 4, 5	5, 12, 13	8, 15, 17	7, 24, 25
6, 8, 10	10, 24, 26	16, 30, 34	12, 48, 50
9, 12, 15	15, 36, 39	24, 45, 51	21, 72, 75
30, 40, 50	50, 120, 130	80, 150, 170	70, 240, 250
3 <i>x</i> , 4 <i>x</i> , 5 <i>x</i>	5 <i>x</i> , 12 <i>x</i> , 13 <i>x</i>	8 <i>x</i> , 15 <i>x</i> , 17 <i>x</i>	7 <i>x</i> , 24 <i>x</i> , 25 <i>x</i>

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Definition	Example
	Definition

7.2 Use the Converse of the Pythagorean Theorem

7.3 Use Similar Right Triangles

Term	Definition	Example
Theorem 7.5		
geometric means		

Proportions Involving Geometric Triangles in ΔABC

Comparing Triangles 1 and 2	
Comparing Triangles 1 and 3	
Comparing Triangles 2 and 3	



Theorem 7.6 Geometric Mean (Altitude) Theorem	
Theorem 7.7 Geometric Mean (Leg) Theorem	

Term	Definition	Example
isosceles right triangle		
Theorem 7.8 45°-45°-90° Triangle Theorem		
Theorem 7.9 30°-60°-90° Triangle Theorem		

7.4 Special Right Triangles

Term	Definition	Example
trigonometry		
trigonometric ratio		
tangent		
Tangent Ratio		

7.5 Apply the Tangent Ratio

Term	Definition	Example
sine		
cosine		
Sine and Cosine Ratios		
Angle of Elevation		
Angle of Depression		
The angles of elevation	on & the angle of depression are	by the Thm.

7.6 Apply the Sine and Cosine Ratios

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Trigonometric Ratio	Abbreviation	Definition
sine of A		
cosine of A		
tangent of A		
cotangent of A		
secant of A		
cosecant of A		

The Six Trigonometric Ratios

7.7 Solve Right Triangles

Term	Definition	Example
solve a right triangle		

Inverse Trigonometric Ratios			
Inverse Tangent			
Inverse Sine			
Inverse Cosine			

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Term	Definition	Example
Law of Sines		
Solving the		
Triangle		

Chapter 7 Extension: Law of Sines and Law of Cosines

The Law of Sines can be used to solve a triangle in these cases:

1. You know the

2. You know the

Law of Cosines (Solving for Side Lengths)	
Law of Cosines (Solving for Angle Measures)	

The Law of Sines can be used to solve a triangle in these cases:

1. You know the

2. You know the