

# Geometry Study Guide Chapter 8 Right Triangles & Trigonometry

## 8-1 Pythagorean Theorem

1. Given 2 legs, can you solve for the hypotenuse?
2. Given the hypotenuse and 1 leg, can you solve for the other leg?
3. What is a Pythagorean Triple? Can you find a third side to accompany 2 given sides (for instance, 7 and 25)?
4. Given 3 sides of a triangle, can you determine if it is a right triangle?
5. Can you simplify radicals?
6. Do you understand how to do these problems? p. 495; #1, 4, 14, 17, 22, 24, 39,

## 8-2 Special Right Triangles

1. Do you remember the relationships of the legs and hypotenuse in a  $45^\circ - 45^\circ - 90^\circ$  triangle?
2. How do you find a leg given the hypotenuse? How do you find the hypotenuse given a leg?
3. Do you remember the relationships of the legs and hypotenuse in a  $30^\circ - 60^\circ - 90^\circ$  triangle?
4. How do you find the short leg given the hypotenuse? What if given the long leg?
5. How do you find the long leg given the hypotenuse? What if given the short leg?
6. How do you find the hypotenuse given the short leg? What if given the long leg?
7. Could you use Trigonometry as a backup plan if you have forgotten the relationships?
8. Do you understand how to do these problems? p. 503; #1-4, 23

## 8-3 Trigonometry

1. What is the ratio for Sine? For Cosine? For Tangent?
2. How do you identify the Adjacent side? The Opposite side? The Hypotenuse?
3. Given any 2 sides of a right triangle, how do you determine which Trig function to use?
4. Algebra skill: When solving an equation which has a variable in the denominator of a fraction, do you understand how to proceed?
5. Do you know how to put your calculator into the "Degree" mode?
6. What type of problem requires you to use Inverse Trig functions?
7. Do you know how to use your calculator for the Inverse Trig functions?
8. Do you understand how to do these problems? p. 510; #1-8, 34,

## 8-4 Angles of Elevation & Depression

1. What is an Angle of Elevation? An Angle of Depression?
2. Do you understand when and how you need to adjust heights for things as eye level?
3. What is line-of-sight? What is line-of-sight distance?
4. What is horizontal distance?
5. Do you understand how to do these problems? p. 518; #8, 19-22

Can you **recognize** when to use Pythagorean Theorem vice Special Right Triangles vice Trigonometry to solve a problem?

## End-of-Chapter Review

Do you understand how to do these problems? p. 535; #5, 8, 9-12, 15-18

**REVIEW: Chapter Review p. 534-536; Vocabulary; Notes; Homework; Classwork; Quizzes**